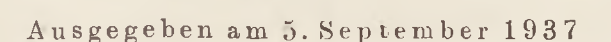
Repertorium specierum novarum regni vegetabilis.
Herausgegeben von Professor Dr. phil. Friedrich Fedde.
Beihefte. Band XCV.

The Labiatae
of
Northern South America:
Colombia, Ecuador and Venezuela

by

Carl Epling


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Conspectus Generum.

Stamina fertilia 2
 Folia linearia: antherae loculi duo divaricati . *Rosmarinus*
 Folia vix linearia saepius ovata; antherae loculus unus abortivus . . . . *Salvia*
Stamina fertilia 4
 Flores omnino sessiles; stamina longe exserta . *Catopheria*
 Flores pedicellati
  Calycum labiae integrae ore itaque truncato . *Scutellaria*
  Calycum dentes 10 hamati . . . . *Marrubium*
  Calycum dentes 5 stricti
   Stamina in labia superiore galeata inclusa
    Herba repens floribus in spicas cylindratas bracteosas compactis . . . . *Prunella*
    Herbae procerae erectae rarius repentes floribus in spicis interruptis dispositis
     Flores aurei . . . . *Leonotis*
     Flores purpurei rarius albidi
      Folia pinnatifida . . . . *Leonurus*
      Folia crenato-serrata
       Nuculae in apice truncatae . . . . . *Lamium*
       Nuculae in apice rotundatae . . . . . *Stachys*
   Stamina e corollarum tubis exserta (rarius inclusa). labia superiore nullomodo galeata
    Labiae inferioris corollarum lacinia media patenter saccata declinata et stamina ad laciniam declinata
     Flores nudi vel bracteis caducis subtenti
      Flores solitarii in axillis . . . . *Eriope*
      Flores plures in axillis . . . . *Coleus*
     Flores in capitulis cymulis vel paniculis bracteatis dispositi . . . . *Hyptis*
      Nuculae frequenter marginatae vix tamen cymbiformes
      Nuculae cymbiformes ad margines valde involutae fimbriatae et laceratae . . *Marsypianthes*

Labiae inferioris corollarum lacinia media plana rarius leniter concava nullomodo saccata
Corollarum laciniae posticae quatuor subaequales connatae, antica subrotunda saepius leniter concava . . . . *Ocimum*
Corollarum laciniae posticae duae (rarius una) tres anticae plus minusve connatae
Verticillastra conferta bracteis orbiculatis planis calyces obtegentibus subtentis; stamina patentim exserta . . . . . *Majorana*
Verticillastra rarius conferta bracteis vel foliolosis vel subulatis subtentis
Corollarum labia superior alte fissa brevis, staminibus valde arcuatis e fisso ascendentibus . . . . *Teucrium*
Corollarum labia superior integra vel emarginata
Staminum connectiva deltoidea patentia; calyces in maturitate vix aucti
Calycum dentes subaequales; calycum os in faucibus hirsuto-annulatum; corollarum tubi 2,5 ad 5 rarius 6 mm longi . . . . . *Minthostachys*
Calycum dentes superiores saepius in basi connati et calycum fauces constricto-annulati; tunc corollarum tubi 8—20 mm longi, tunc corollarum tubi saepius 6—7 mm longi rarius 1—4 mm (vide praesertim *Xenopoma*) . . . . *Satureja*
Staminum connectiva subnulla nullomodo deltoidea incrassata; calyces in maturitate aucti etiam tumido-globosi; corollarum tubi in basi supra nuculas vel piloso-annulati vel inter stamina antica pilosi . . *Lepechinia*

Teucrium L.

Teucrium L. Sp. Pl. 562, 1753 et in Gen. Pl. ed. V, 247, 1754.

Herbae floribus in spicas sat densas congestis; calycibus 10-venis campanulatis quinquedentatis dentibus imparibus tubo

interdum subinflato et nuculis distento: corollarum tubis brevissimis in calyce inclusis, labia superiore incisa e calyce breviter exserta, inferiore pro rata longiore trifida, lacinia media ovata declinato-patente lateralibus minoribus; staminibus quatuor didymis anticis longioribus, omnibus e labiae superioris sinu patentim exsertis declinato-arcuatis; stylo subaequaliter bifido; nuculis hilo prominentiore et laterali rugoso-reticulatis in maturitate cohaerentibus.

1. **T. vesicarium** Mill., Gard. Dict., ed. 8, sub Teucrio no. 17 1768. — *T. inflatum* Sw., Prodr. Veg. Ind Occ. 88, 1788.

Herba erecta caulibus e rhizomata repente erectis simplicibus altitudine 30—90 cm et ultra pilis extensis mollibus plus minusve vestitis interdum incanis rarius glandulosis; foliorum laminis ovatis rarius ovato-lanceolatis 4—12 cm longis, in apice acutis, in basi rotundato-truncatis interdum subcuneato-angustatis, margine subdupliciter serrata, pagina superiore hirtella cinereoviride interdum glabra, inferiore molliter pubescente saepius incana, petiolis 1—3 cm longis elatis; floribus in spicas cylindratas 5—20 cm longas saepius ternatas pilis brevibus extensis et frequenter longioribus tenuibus vestitas congestis, bracteis lineari-lanceolatis acuminatis 4—5 mm longis subtentis; calycibus maturis extus pilis brevibus extensis dense vestitis interdum longioribus tenuibus conspersis, saccatis globosis nuculis distentibus 4—5 mm diametro, dentibus 1—2 mm longis deltoideo-ovatis conniventibus; corollarum tubo 4—5 mm longo, labia inferiore 5 mm longa; nuculis 2—2,5 mm longis rugoso-reticulatis glabris.

Verisimiliter ex Ind. Occ. disseminata est.

Colombia: In insula Cabio prope Barranquilla, VII. 1929. Fr. Elias 789. — Ecuador: Guayas: Milagro, 50 m, 30. VI. to 2. VII. 1923, Hitchcock 20210; prope Guayaquil, Hartweg 684.

var. **palustre** Epl. in Fedde, Rep. Beih. 85,3,1936. — *T. palustre* Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. Pl. 2, 306, 1817. — ? *T. carthaginense* Lange in Kjoeb. Vidensk. Meddel. 97, 1881. — ? *T. hirtum* Willd., ex Spreng., Syst. 2, 710, 1825 (nomen).

Caulibus pilis crispulis brevibus et longioribus strictis sparse vestitis; floribus bracteis ovato-lanceolatis 5—12 mm longis subtentis: calycibus maturis pilis brevibus plus minusve appressis et longioribus strictis conspersis, saccatis vix globosis, dentibus plus minusve erectis: corollarum tubo 5—7,5 mm longo, labia inferiore 5 mm longa.

Colombia: Bolivar: Ad Rio Sinu, 7.—10. III. 1918, Pennell 4619; prope Cartagena, 1919, Fr. Heriberto 115; ad Cienaga de Oro, 28. I. 1918, Pennell 4124; inter ostia Rio Sinu et Carthagena, Bonpland.

2. **T. tenuipes** Epl. in Ann. Mo. Bot. Gard. 12, 119, 1925.

Herba altitudine 20—40 cm (et ultra?) caule e rhizomate repente erecto diametro circiter 2 mm pubescente superne ramoso; foliorum laminis 2—6 cm longis, deltoideo-ovatis, in apice obtusiusculis, in basi truncato-subcordatis, margine convexa irregulariter serrata, pagina superiore molliter pubescente, inferiore pallidiore interdum subtomentosa, petiolis gracilibus 1 ad 3,5 cm longis elatis; floribus in spicas cylindratas dispositis, bracteis lineari-lanceolatis acuminatis villosis pedicellos paulo superantibus subtentis; calycibus 5,5—7 mm longis campanulatis extus pilis extensis mollibus sat dense pubescentibus etiam subvelutinis, ore obliquo, dentibus 2—2,5 mm longis deltoideo-ovatis acutis anticis angustioribus; corollarum tubo 4 mm longo, labia inferiore 5—7 mm longa; nuculis 2,5 mm longis reticulato-rugosis.

Galapagos: Sine loco, Anderson 113; Chatham Isl., VII. 1891, Baur 164; Chatham Isl., Wreck Bay, 23. II. 1906, Stewart 3344; Charles Isl., 1852, Anderson; Charles Isl., 1450 ped., 27. II. 1906, Stewart 3342, 3343; Chatham Isl., Wreck Bay, 650 ped., 27. I. 1906, Stewart 3345.

Rosmarinus L.

1. *R. officinalis* L., Sp. Pl. 23, 1753 (*R. chilensis* Molina, Saggio sulla storia nat. de Chili 158, 1782). — Colombia.

Marrubium L.

1. **M. vulgare** L., Sp. Pl. 583, 1753 (*M. hamatum* Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. Pl. 2, 310, 1817). — Colombia, Ecuador.

Stachys.

Stachys L., Sp. Pl. 580, 1753 et Gen. Pl., ed. V, 253, 1754.

Herbae vel annuae vel perennes caulibus maximam partem debilibus et internodiis elongatis etiam prostratis, rarius in basi suffruticosis; foliorum laminis nunc oblongis nunc ovatis, saepe deltoideis, supremis et petiolis gradatim deminutis, rarius pilis sericeis saepius pilis rigidioribus rectis vestitis; floribus saepius tribus in foliorum supremorum deminutorum axillis dispositis, glomerula saepius remota formantibus; calycibus florentibus turbinatis, pedicellis brevibus elatis, in maturitate campanulatis vel urceolatis, dentibus nunc deltoideis nunc lanceolatis in apice

maximam partem spinis rigidis attenuatis rarius muticatis, ore rarius obliquo; corollarum tubo cylindrato, saepius leniter arcuato, superne leniter dilato, nunc integro et intus glabrato nunc sub labiam inferiorem lenissime saccato et intus piloso-annulato, limbo valde bilabiato, labia superiore erecta concava saepius rotundata, inferiore patente trifida lacinia media majore; staminibus saepius ad tubi medium positis, infime pubescentibus, didymis, e tubo sub labiam superiorem exsertis; antheris bilocularibus, thecis late divaricatis; stylo in apice inaequaliter bifido; nuculis nunc laevibus nunc verrucosis obovatis, in apice nec truncatis.

Stachydes colombianae.

Caules ad angulos pilis rigidis in basi pustulatis retrorse armati . . . . *S. hamata*
Caules pilis extensis nec pustulatis sat dense vestiti vel glabrati
  Corollarum tubi 2,5—3,5 mm longi e calycibus vix exserti
    Calycum dentes obtusi nunc muticati nunc debiliter spinulosi; herbae pusillae . . . . . *S. pusilla*
    Calycum dentes acuminato-spinosi, patentes; herbae majores caulibus ad 60 cm longis . *S. Micheliana*
  Corollarum tubi 5—15 mm longi e calycibus patentim exserti
    Corollarum tubi 10—15 mm longi . . . . . *S. lamioides*
    Corollarum tubi 5—7 mm longi
      Stamina e corollae tubo vix 1 mm exserta: tubi intus nudi . . . . *S. eriantha*
      Stamina e corollae tubo 2—3 mm exserta: tubi intus ad medium annulati
        Herbae repentes; folia fere glabra ovato-oblonga vix 1 cm lata . . . . *S. radicans*
        Herbae debiles vix tamen repentes; folia sat hirsuta ovata 1—3 cm lata
          Folia acutiuscula glabrata 3—7 cm longa *S. hebens*
          Folia obtusa sat hirsuta 1,5—3,5 cm longa *S. bogotensis*

Stachydes ecuadorenses.

Corollarum tubi 3—3,5 mm longi; flores in axillis saepius solitarii . . . . *S. pusilla*
Corollarum tubi 5—15 mm longi: flores in axillis saepius tres
  Corollarum tubi 10—15 mm longi . . . . . . *S. lamioides*
  Corollarum tubi 5—9 mm longi

Stamina e corollae tubo vix 1 mm exserta
Tubi intus annulati; calycum dentes acuminato-spinosi . . . . *S. debilis*
Tubi intus exannulati; calycum dentes nunc muticati nunc debiliter spinulosi . . . . *S. eriantha*
Stamina e corollae tubo 2—3 mm exserta
Folia glabra; calycum dentes spinis 1,5 ad 2 cm longis armati . . . . *S. Sprucei*
Folia sat hirsuta; calycum dentes in spinis debilibus circiter 0.5 mm longi frequenter subnulli terminati . . . . *S. elliptica*

Stachydes venezuelanae.

Folia in basi rotundata vix crenata, ovato-cordata; corollarum tubi 8 mm longi . . . . *S. venezuelana*
Folia in basi pulchre cordata; corollarum tubi 6—6,5 mm longi . . . . *S. Fendleri*

1. **S. arvensis** L., Sp. Pl., ed. II. 814, 1763.

Herba annua decumbens altitudine 15—30 cm, caulibus gracilibus nunc simplicibus nunc in basi ramosis, pilis extensis sparse vestitis, internodiis elongatis; foliorum laminis tenuibus ovatis in apice rotundatis, in basi cordatis, infimis 2—3 cm longis, petiolis 0,5—1 cm longis elatis, supremis gradatim deminutis, omnibus sparse hirsutis, crenatis; floribus in foliorum supremorum axillis et in spicis interruptis laxis verticillastris remotis dispositis; calycibus florentibus 3—4 mm longis in maturitate 6—8 mm longis, campanulatis, extus sparse hirsutis, dentibus saepius lanceolatis 2,5—3 mm longis, debiliter spinosis, pedicellis 1—2 mm longis elatis; corollarum tubo 3,5—5 mm longo, supra basim obscure annulato; nuculis vix 2 mm diametro, muriculatis, variegatis.

May be expected as a weed around ports and towns of low elevation. Has been collected only in Venezuela.

2. **S. pusilla** (Wedd.) Briq. in Ann. Conserve. et Jard. Bot. Genève 2. 120. 1898. — *S. elliptica* var. *pusilla* Wedd., Chl. And. 153, 1860.

Herba annua pusilla ramosior vegeticulas saepe formans caulibus 5—20 cm longis pilis brevibus sparse vestitis; foliorum laminis 5—20 mm longis, ovatis vel oblongo-ovatis, in basi rotundato-truncatis, margine pro rata grande dentata, crenis circiter 1 mm altis obtusis, paginis ambobus pilis rectis sparse hirsutis, petiolis 5—15 mm longis elatis; floribus in foliorum supremorum axillis saepius solitariis interdum binis ternisve, bracteolis parvis setaceis subtentis; calycibus florentibus 3—3,5 mm longis

turbinatis, in maturitate 4 mm longis urceolatis nuculis distentis extus breviter vestitis, dentibus vix 1 mm longis ovatis obtusis nunc muticatis nunc debiliter spinulosis; corollarum tubo 3 ad 3,5 mm longo e calyce vix exserto intus exannulato, labia superiore 1,5—2 mm alta; staminibus ad fauces positis; nuculis 1,5—2 mm diametro.

Colombia: Montserrate ad Bogota, 3100 m, 2. I. 1914, Fr. Ariste-Joseph 942; in paramo de Herve (ex Wedd.), Goudot. — Ecuador: Monte Antisana, Hartweg 1345; Paramo de Lanancaja, Spruce 5861; sine loco, Spruce 5946; Cuenca, 17.—24. I. 1918, Rose 22901; sine loco, Jameson.

3. **S. eriantha** Benth., Lab. Gen. et Sp. 549, 1834 et in DC., Prodr. 12, 479, 1848. — *S. repens* M. et G. in Bull. Acad. Brux. 11, II, 194, 1844.

Herba pusilla altitudine 10—15 cm perennis caulibus prostratis ramosis repentibus pilis extensis brevibus et plus minusve glandulosis sparse vestitis; foliorum laminis 6—18 mm longis, nunc rotundatis nunc oblongo-ovatis, petiolis 2—5 mm longis elatis, in apice rotundatis, in basi truncato-rotundatis vix cordatis, marginibus convexioribus crenatis; paginis ambobus hirtis brevibus plus minusve appressis vestitis; floribus in foliorum supremorum sat deminutorum axillis dispositis, glomerulis nunc confertis nunc 1—2 cm inter se distantibus; calycibus subsessilibus 4,5—6 mm longis turbinatis, in maturitate urceolatis extus pilis brevibus extensis vestitis, dentibus 1,5—2 mm longis ovatis obtusis nunc muticatis nunc spinis brevibus debilibus 0,2—0,6 mm longis armatis; corollarum labia superiore 2—2,5 mm alta, inferiore tubum subaequante; staminibus e corollae tubo vix 1 mm exsertis; nuculis maturis non visis.

South American specimens referred here differ from Mexican chiefly in the slightly shorter stamens and less fleshy roots.

Colombia: Norte de Santander: Paramo de Romeral, 3800 to 4200 m, 30. I. 1927, Killip et Smith 18691; Santander: Paramo de Santurban prope Vetas, 3950—4160 m, 17. I. 1927, Killip et Smith 17497. — Ecuador: Paramo in declivitate occidentale montis Chimborazo, 3000 m, 5. X. 1923, Hitchcock 22042; Urbina, Chimborazo, 11400 ped., 22. X. 1923, Anthony et Tate 360; ad Carchi prope Tulcan in collibus silvaticis, 10. VIII. 1923 Hitchcock 20965.

4. **S. Micheliana** Briq. ex Micheli in Mém. Soc. Phys. Hist. Nat. Genève 32, 107, 1897. — ? *S. Mayorii* Briq. in Mém. Soc. Neuchât. Nat. Sci. 5, 402, 1913.

Herba caulibus maximam partem decumbentibus 30—60 cm longis, pilis extensis sparse vestitis, internodiis elongatis; foliorum laminis 2—5 cm longis. tenuibus, petiolis hirsutis 0,5—3 cm longis elatis, ovatis, obtusis, in basi cordatis, marginibus praesertim infra medium convexis, supra medium fere rectis, crenato-serratis, crenis gibbosis, paginis ambobus tenuiter hispido-hirsutis; floribus in spicis interruptis 10—30 cm longis dispositis, bracteis subfoliosis valde deminutis reflexis subtentis, glomerulis subglobosis vix 1 cm diametro, infimis inter se 1—3 cm distantibus, supremis confertis; calycibus florentibus turbinatis campanulatis 3,5—4 mm longis extus hispidis, in maturitate urceolatis, dentibus 1,5 mm longis ovato-lanceolatis acuminato-spinosis patentibus; corollarum tubo 2,5—3 mm longo pro rata crasso, intus nudo; nuculis 1 mm diametro.

Seems to be identical with the plants of Paraguay and Argentina.

Colombia: Antioquia: Prope Medellin, 24. III. 1927, Toro 139; Caldas: La Sombra prope Apia, 1300—1600 m, 4. IX. 1922, Pennell 10267; Rio Quindio prope Armenia, 1300—1500 m, 25. VI. 1922, Pennell, Killip et Hazen 8674; San Clemente, 1800—2200 m, 16. IX. 1922, Pennell 10675; Cundinamarca: Cachipay, 1600 m, 14. X. 1917, Rusby et Pennell 1229; El Valle: La Cumbre, 1600—1800 m, 21.—25. V. 1922, Killip 6005; La Cumbre, 1500—1700 m, 7.—10. V. 1922. Pennell 5211; El Cauca: Rio Ortega prope Tambo, 1900—2100 m, 2. VII. 1922, Pennell et Killip 8067; Cuesta de Tocota inter Buenaventura et Cali, 1500—1900 m, XII. 1905, Pittier 704; La Manuelita prope Palmira, 1100—1300 m, XII. 1905, Pittier 823; Ruila: Balsillas, 2000—2100 m. 3.—5. VIII. 1917, Rusby et Pennell 716.

5. **S. radicans** Epl. in Fedde, Rep. Beih. **80**, 24, 1934.

Herba ut videtur annua repentibus caulibus in nodis infimis radicantibus prostratis vel ascendentibus ramosis 15—30 cm longis, pilis extensis sparse vestitis. fere glabris: foliorum laminis maximam partem ovato-oblongis, 1—2 cm longis, in apice rotundatis, in basi rotundato-truncatis, vix cordatis, marginibus sat convexis obtuse serratis, paginis ambobus pilis rectis brevibus sparse conspersis, fere glabris, petiolis 2—5 mm longis elatis; floribus in foliorum supremorum deminutorum axillis dispositis, superne frequenter spicas interruptas confertiores formantibus; calycibus florentibus 4,5—5 mm longis turbinatis subsessilibus extus pilis rectis breviter hirsutis, dentibus deltoideo-ovatis vix 2 mm longis breviter spinosis; corollarum tubo 5,5—6 mm longo intus ad

medium patentim annulato; labia superiore 3—3,5 mm alta; staminibus 2—2,5 mm e tubo exsertis; nuculis circiter 1,5 mm diametro.

Colombia: Chapinero prope Bogota, 8500 ped., V. 1923, Pring 62; verisimiliter ad Bogota, Goudot: prope Bogota, 25. V. 1926, Juzepczuk 7939; sine loco. Linden 109; sine loco, Triana.

6. **S. hebens** Epl. in Fedde. Rep. Beih. **80**, 35. 1934.

Herba perennis ut videtur caulibus decumbentibus laxis 40—60 cm longis et ultra gracilibus. pilis extensis sparse vestitis, internodiis elongatis: foliorum laminis 3—7 cm longis, sat tenuibus, ovatis, obtusis, frequenter tamen acutiusculis, in basi pulchre cordatis, margine convexiore interdum supra medium rectiuscula, crenata, pagina superiore tenuiter hirsuta, inferiore ad venas sparse vestita fere glabra, petiolis gracilibus 1—5 cm longis elatis; floribus in spicis gracilibus interruptis 15—25 cm longis, bracteis subfoliosis subtentis glomerulis remotis, inter se 1—5 cm distantibus; calycibus florentibus 5—5,5 mm longis turbinatis extus sparse hirtis, in maturitate urceolatis, dentibus vix 2 mm longis deltoideo-lanceolatis debiliter spinosis, pedicellis 1—2 mm longis elatis; corollarum tubo circiter 6 mm longo, intus supra basim annulato; nuculis circiter 1.5 mm diametro.

Colombia: Santa Marta, 4500 ped.. H. H. Smith 1362.

7. **S. elliptica** Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. Pl. **2**, 308. 1817.

Herba pusilla perennis caulibus 15—25 cm longis in basi decumbentibus sparse ramosis. pilis brevibus extensis hirsutis, internodiis plerumque quam folia brevioribus: foliorum laminis 1—2,5 mm longis. nunc ovatis nunc oblongo-ovatis, in apice rotundatis, in basi truncato-cordatis, marginibus convexioribus rarius ad medium plus minusve rectiusculis crenatis, paginis molliter breviterque hirsutis, petiolis ad 1 cm longis elatis; floribus in foliorum supremorum axillis dispositis pedicellis 1—2 mm longis elatis, glomerulis sat confertis infimis rarius ad 3 cm remotis; calycibus florentibus 6—6,5 mm longis, turbinatis, extus pilis rectis brevibus vestitis subhirsutis, dentibus deltoideo-ovatis 1,5—2,5 mm longis debiliter spinosis; corollarum tubo 7 ad 9 mm longo, intus supra basim patentim annulato; labia superiore 3—4 mm alta; staminibus supra tubi medium positis e tubo 2 mm exsertis: nuculis non visis.

Ecuador: In monte ignivomo Cotopaxi dicto, VIII. 1856, Remy; in pascuis elevatis andium quitensium, 13000 ped., Jame-

son 62; sine loco, Jameson 161; in monte Pichincha 13000 to 14000 ped., Jameson 46, 214; in monte Pichincha, 9000 to 11500 ped., Wagner; in monte Pichincha 13000 ped., Johnson; in andibus quitensibus, in monte Pichincha, Johnson; in andibus quitensibus, 1855, Couthouy; in monte Chimborazo 4000 m, 7. VII. 1876, André 462; Urbina, Chimborazo, 11400 ped., 22. ad 28. X. 1923. Anthony et Tate 418; in monte ignivomo Pichincha, 3500 m, 21. IV. 1927, Firmin 37; in arenosis ad villam Antisanam, 13400 ped., Hartweg 1346 (partim).

8. **S. venezuelana** Briq. l. c. 2, 114, 1898.

Herba perennis caulibus ascendentibus 30—50 cm altis et ultra pilis extensis sat dense vestitis, internodiis elongatis; foliorum laminis 3—4,5 cm longis, oblongo-ovatis, in apice rotundatis, in basi vel rotundatis vel subcordatis, marginibus convexis et saepe supra medium rectiusculis crenatis, paginis ambobus pilis rectis vestitis, superiore hirsuta, pedicellis 0,5—1 cm longis elatis; floribus in spicis interruptis elongatis etiam ramosis vel in foliorum deminutorum supremorum axillis dispositis; calycibus florentibus turbinatis 6 mm longis elatis, dentibus ovatis circiter 2 mm longis subito spinosis, spinis 0.5 mm longis; corollarum tubo 8 mm longo sat crasso intus supre basim annulato; nuculis circiter 1.5 mm diametro.

Due the fragmentary nature of the collections especially of the typical form it is difficult to judge whether two species are involved.

Venezuela: In andibus regionum Trujillo et Merida, Linden 388; in campis elevatis paramos dictis inter Sta. Domingo et Chacopa, Merida, 3200 m, 14. IX. 1922, Jahn 1131; Merida, Moritz 991, 1621; Paramo de las Rosas Jabon, Trujillo, 3300 m, 2. X. 1910. Jahn 31; Paramo Santo Domingo. Merida, 3600 m, 12. IX. 1922, Jahn 1099; Paramo de la Sul, Merida, 3000 m, 3. IX. 1921, Jahn 513.

9. **S. Sprucei** Briq. l. c. 2, 117, 1898.

Herba perennis ut videtur altitudine 30—50 cm caulibus in basi decumbentibus ut videtur repentibus, superne ascendentibus, interdum ramosis, maximam partem fere glabris, internodiis plerumque elongatis; foliorum laminis 3,5—8 cm longis, tenuibus, ovatis, in apice rotundatis, in basi rotundatis et plus minusve cordatis, marginibus nunc convexis nunc ad medium rectiusculis etiam concavis crenatis, paginis ambobus glabris, petiolis 1—3 cm longis elatis; floribus in spicis interruptis 15—20 cm longis dispositis, bracteis subfoliosis valde deminutis reflexis subtentis,

glomerulis inter se 1—4 cm distantibus; calycibus florentibus 8—9 mm longis turbinatis extus pilis rectis glandulosis tenuiter vestitis, in maturitate paulo auctis, dentibus deltoideo-acuminatis 3—5 mm longis acutissime spinosis, spinis 1,5—2 mm longis; corollarum tubo 6—8 mm longo, intus supra basim annulato; nuculis circiter 1,5 mm diametro.

Ecuador: Huigra: Ad villam Hacienda de Licay dictam, 6. IX. 1918. Rose 22535; sine loco, Spruce 5964.

10. **S. debilis** Kunth l. c. 309.

Herba perennis debilis laxa caulibus gracilibus decumbentibus 30—60 cm longis interdum ramosis, pilis extensis sparse vestitis fere glabris, internodiis elongatis; foliorum laminis 2—4 cm longis, vel ovatis vel oblongo-ovatis, in apice maximam partem rotundatis, in basi subcordatis, marginibus ad medium saepius rectiusculis utrimque crenatis, paginis ambobus pilis rectis sparse vestitis frequenter fere glabris, foliorum infimorum petiolis 1—2 cm longis, supremorum subnullis; floribus in foliorum supremorum deminutorum axillis spicas interruptas laxas formantibus, glomerulis inter se 1—8 cm distantibus; calycibus florentibus turbinatis 5—5,5 mm longis, in maturitate campanulatis extus pilis brevibus rectis sparse vestitis et glandulosis, dentibus 2 ad 2,5 mm longis deltoideo-acuminatis, acutissimis, spinis 1—1,5 mm longis armatis; corollarum tubo sat crasso 5—6 mm. longo intus supra basim annulato; nuculis circiter 1,5 mm diametro.

Ecuador: Passim in regione interandina prope Riobamba, II. 1922, Mille 43; in andibus quitensibus, Couthouy; prope Ambato, II. 1919, Pachano 143; in altaplanitie Rumibamba prope Quito, Hartweg 1344; Pichincha: in prato humido ad La Carolina prope Quito, 14. IV. 1920, Heilborn 515; Punin: Quebrada Chalan, 9200 ped., 28. X.—4. XI. 1923, Anthony et Tate 453, 440; in andibus sine loco, Spruce 5860; prope Tambillo ad Quito, 22. VI. 1876, André 3688; Baños, Tungurahua, 6500 ft., Tate 626.

11. **S. bogotensis** Kunth l. c. 309. — *S. hians* Briq. l. c. 2, 116. 1898.

Herba perennis debilis caulibus laxis decumbentibus pilis extensis sparse vestitis, internodiis maximam partem elongatis; foliorum laminis saepius 1,5—3,5 cm longis, in apice nunc rotundatis nunc obtusis, in basi rotundatis et plus minusve cordatis, marginibus saepius convexis interdum supra medium rectiusculis, crenatis, paginis ambobus hirsuto-villosis; floribus in

spicis interruptis et in foliorum supremorum axillis dispositis, glomerulis inter se 1—4 cm distantibus; calycibus florentibus 5 mm longis turbinatis extus pilis rectis sat dense vestitis, in maturitate campanulatis, dentibus circiter 2 mm longis deltoideis subito spinosis; corollarum tubo sat crasso 5—6 mm longo, intus supra basim annulato; nuculis circiter 1,5 mm diametro.

Colombia: Santander: Prope Vetas, 3100—3200 m, in dumetis ripariis, 16. I. 1927, Killip et Smith 17362; Cundinamarca: in paramo de Choachi ad Bogota, 3700 m, 8. VIII. 1922, Killip et Fr. Ariste-Joseph 11934; Cundinamarca; prope Zipacon, 14. VIII. 1917, Rusby et Pennell 1219; Cundinamarca: ad Rio del Arzobispo prope Bogota inter frutices 2800—2900 m, 22.—24. IX. 1917, Pennell 2098; Facatativa, 2600 m, 16. X. 1875, André 643; Bogota, 1862, Grandmaison 68; ad cataractam Tequedamam. 8.—11. XII. 1852, Holton; ad Santa Fe de Bogota, Bonpland.

12. **S. Fendleri** Briq. l. c. 2, 115, 1898.

Herba ut videtur perennis debilis caulibus 30—50 cm longis in nodis infimis radicantibus, pilis extensis subvillosis; foliorum laminis sat tenuibus, 3—6 cm longis, late ovatis, obtusis, in basi pulchre cordatis, marginibus supra medium rectiusculis crenatis, crenis gibbosis, paginis ambobus pilis rectis sparse vestitis superiore subhirsuta, petiolis gracilibus 1—6 cm longis elatis; floribus nunc in spicis interruptis nunc in foliorum supremorum axillis dispositis, glomerulis inter se 1—8 cm distantibus; calycibus 5—6 mm longis florentibus turbinatis, in maturitate urceolatis, extus pilis extensis sparse vestitis, dentibus ovato-lanceolatis, 2—2,5 mm longis acuminato-spinosis, pedicellis 1—2 mm longis elatis; corollarum tubo 6—6.5 mm longo, intus supra basim annulato; nuculis circiter 1,5 mm diametro.

Venezuela: Prope Caracas, 1680 m, 1925, Tate 49; ad Coloniam Tovar. 1854-5, Fendler 879; inter El Aguacatal et Alto del Cogallal in sylvis, 1000—2150 m, 18. II. 1921, Pittier 9241; in regione temp. Moritz 415.

13. **S. lamioides** Benth., Pl. Hartweg. 244, 1846 et in DC., Prod. 12, 468, 1848.

Herba perennis decumbens caulibus ascendentibus pilis extensis sat dense vestitis subhispidis, frequenter ramosis; foliorum laminis 3—6 cm longis, petiolis hirsutis 2—5 cm longis elatis, nunc late ovatis nunc deltoideis, in apice plerumque acutis, in basi pulchre cordatis, marginibus saepe convexis maximam partem

supra medium rectis, utrimque crenatis, paginis ambobus pilis rectis sat hirsutis in siccis rufis; floribus in foliorum supremorum deminutorum axillis dispositis, glomerulis remotis inter se 2—4 cm distantibus; calycibus florentibus sat tenuibus 7—8 mm longis extus hispido-hirsutis, dentibus 1,5—2 mm longis deltoideo-ovatis acutis spinis 0,5—1 mm longis armatis, pedicellis 2—4 mm longis elatis; corollis rubro-purpureis magnitudine variabilibus, tubo 10—15 mm longo crasso ad basim leniter gibboso et intus piloso-annulato; nuculis fere 2 mm longis verrucosis.

Colombia: El Cauca: In ascensu ad Paramo de Sotara, Popayan, Hartweg 1343; ad Quindio, Triana; Alto Pesares prope Popayan, 2500—2800 m, Lehmann 5960; ad Paramo de Guanacas prope Popayan, Lehmann; Boqueron del Quindio, 3400 m, 10. III. 1876, André 2219; ad Rio Cauca inter fruticibus 2950—3000 m, 15.—17. VI. 1922, Pennell 7066; Rosalito prope Paramo de Ruiz in prato, 15.—17. XII. 1917, Pennell 2951; in dumetis ad Rio Aguablanca prope Canaan, 2900—3100 m, 11. ad 16. VI. 1922, Killip 6739; ad vias in gramineis ad Caramanta, 1500—2100 m, 19. IX. 1922, Pennell 10793; Paramo de la Union 27. V. 1876; André 463; Paramo de Ruiz, 2800—3500 m, 11. IX. 1883, Lehmann 3105; ad Carthago, Goudot; Alto de Cuitambo, Sotara, 2900—3400 m, Lehmann 6189.

Ecuador: Sine loco, Spruce 5503; ad Loja, 8. XI. 1876, André 4423; Loja, Spruce 5536.

14. **S. hamata** Epl. in Fedde, Rep. Beih. **80**, 49, 1934.

Herba ut videtur perennis caulibus ascendentibus sat elongatis gracilibus ad angulos pilis rigidis brevibus pustulatis retrorse hamatis armatis caeterum glabris, internodiis elongatis; foliorum laminis mediis 5—6 cm longis, infimis non visis, anguste ovatis, acuminatis, acutissimis, in basi pulchre rotundatis, leniter cordatis, marginibus crenatis, paginis ambobus pilis rectis sparse vestitis, superiore subhirsuta, petiolis 1—2 cm (et ultra?) elatis; floribus in spicis interruptis elongatis bracteis subfoliosis mox valde deminutis subtentis, glomerulis inter se 1—6 cm distantibus supremis confertis; calycibus florentibus 8—9 mm longis turbinatis in maturitate paulo auctis campanulatis extus pilis rectis sparse vestitis, pedicellis 1—2 mm longis elatis, dentibus deltoideo-ovatis circiter 3 mm longis patentibus spinosis, spinis 1,5—2 mm longis; corollarum tubo 8—9 mm longo, intus ad medium valde annulato; nuculis maturis non visis.

Colombia: In Paramo del Quindio, 10. III. 1876. André 2179; sine loco, 25. XI. 1853. Holton 490.

Leonurus L.

1. **L. sibiricus** L., Sp. Pl. 584, 1753. — Colombia, Venezuela.

Leonotis R. Br.

1. **L. nepetaefolia** R. Br., Prodr. 504, 1810. — Colombia, Venezuela.

Lamium L.

1. **L. amplexicaule** L., Sp. Pl. 579, 1753. — Ecuador.

Prunella L.

1. **P. vulgaris** L., Sp. Pl. 600. 1753 (*P. aequinoctialis* Kunth in Humboldt et Bonpland. Voy., Nov. Gen. et Sp. Pl. 2, 323, 1817). — Colombia.

Lepechinia.

Lepechinia Willd. in Hort. Berol. 1, 20, t. 21, 1806. — *Algue Laguen* Feuillée, Hist. Pl. Medic. 4, 1725 (nomen vernaculum). — *Alguelaguen* Adanson, Fam. 2, 505, 1763 (nomen subnudum). — *Phytoxis* Molina, Sagga sulla Storia Nat. del Chile, ed. II, 145. 290, 1810. — *Phytoxys* Sprengel, Syst. 2, 676, 1825 (nomen). — *Sphacele* Bentham in Edwards' Bot. Reg. sub. pl. 1289, 1829, in Lab. Gen. et Sp. 567, 1834 et in DC., Prodr. 12, 254, 1848 (nomen conservandum). — *Astemon* Regel, Ind. Sem. Hort. Petrop. 38, 1860. — *Alguelagum* Kuntze, Rev. Gen. 2, 511, 1891.

Nunc herbae perennes humiles caulibus paucis in basi suffruticosis nunc frutices et arbores parvae; foliorum habitus saepius fere Salviae laminis saepe amplis maximam partem deltoideo-ovatis vel elliptico-lanceolatis, pilis ramosis saepius pubescentibus, pagina superiore saepe bullato-rugosa etiam rugosissima; floribus rarius in foliorum axillis solitariis frequenter tribus in bracteorum axillis saepius 3—9 in verticillastris congestis, verticillastris saepius approximatis in paniculis instructis; calycibus florentibus campanulatis, saepius subbilabiatis, dentibus tribus posticis maximam partem in basi leniter connatis, duobus anticis nunc liberis nunc ad medium et ultra connatis, omnibus subaequilongis, nunc muticis nunc acuminatis, in maturitate tubo aucto saepe chartaceo, maximam partem inflato etiam globoso-tumido, dentibus vix mutatis; corollarum tubo nunc cylindrato nunc campanulato, intus ad basim vel annulato vel nectarostegio e pilis brevibus constaturo inter filamentorum anticorum bases ornato; corollarum laciniis pro rata brevibus subaequalibus tamen labiae inferioris lacinia media quam alterae duplo majore; staminibus nunc ad tubi medium nunc ad fauces sitis in tubo frequenter inclusis; styli ramis planis acutis; nuculis obovatis laevibus atris.

Plantae ecuadorenses:

Folia 1—2 cm lata in basi acuta . . . . . . *L. mutica*

Folia 3—6 cm lata in basi plus minusve truncato-cordato nec acuta . . . . *L. paniculata*

Plantae venezuelano-colombianae:

Herbae perennes humiles in basi procumbentes foliorum laminis 5—2 cm latis

Herbae altitudine 5—10 cm caulibus molliter albo-lanatis. foliis subtus albo-lanatis . . *L. humilis*

Herbae altitudine 30—40 cm caulibus pilis saepius extensis villosis, foliis subtus cinereo-hirsutis . . . . *L. hirsuta*

Frutices vel arbores parvae foliorum laminis 2—6 cm latis et ultra

Calycum dentes 6—8 mm longi . . . . . . *L. salviaefolia*

Calycum dentes 1—2 mm longi

Folia in basi attenuata . . . . *L. bullata*

Folia in basi truncato-subcordata etiam hastata

Calycum dentes maximam partem obtusi 0,5—1 mm longi . . . . *L. paniculata*

Calycum dentes maximam partem acuti 1—1,5 mm longi . . . . *L. conferta*

1. **L. hirsuta** Epl. in Fedde, Rep. Beih. **85**, 19, 1935. — *Sphacele hirsuta* Epl. in Ann. Mo. Bot. Gard. **13**, 49, 1926.

Herba fragrans perennis humilis altitudine 20—40 cm caulibus procumbentibus paucis in basi ramosis, pilis saepius extensis sat villosis; foliorum laminis oblongis, 2—6 cm longis, 1,5—2 cm latis, in apice obtusis vel rotundatis, in basi ad petiolos marginatos 0,5—1,5 cm longos attenuatis, pagina superiore viride bullulato-rugosa tenuiter hirtella, inferiore cinereo-hirsuta maximam partem pallidiore, marginibus saepius rectiusculis irregulariter crenatis; floribus tribus in bracteorum subfoliosorum deminutorum axillis dispositis glomerulis inter se 1,5—5 cm distantibus in racemis ascendentibus rarius paniculatis 15—25 cm altis instructis; calycibus florentibus 3,5—4 mm longis dentibus subulatis, in maturitate campanulatis 8—9 mm longis extus sparse hirsutis, dentibus 2,5—3 mm longis in basi deltoideis caetero subspinosis tribus posticis sinibus rotundatis latioribus ab anticis separatis, pedicellis 1,5—3 mm longis elatis; corollis pallide caerulescentibus 5—5,5 mm longis late tubulosis, laciniis subaequilongis circiter 1 mm longis, labiae inferioris lacinia media quam laterales dupliciter latiore;

staminibus ad tubi medium sitis didymis, anticorum filamentis 1,5 mm longis, posticorum brevioribus, nectarostegio subannulato e pilis brevibus infra tubi medium sito; stylo vix exserto; nuculis atris laevibus obovatis circiter 2 mm longis.

Colombia: Santander: Paramo de Las Puentes prope La Baja, 3500—3700 m, 25. I. 1927, Killip et Smith 18192; Paramos de Tunja, 3000 m, Triana; in Sierra Pelada, 3700 m, 30. VIII. 1878, Kahlbreyer 718; Paramo de Tunja, 3000 m, Linden 1240; Cundinamarca: Paramo prope Bogota, VII. 1917, Fr. Ariste-Joseph A 86. — Venezuela: Merida: Sine loco, Moritz 992.

2. **L. humilis** Epl. l. c. 85, 19, 1935.

Herba perennis humilis ut videtur e caudice lignoso caulibus in basi procumbentibus 5—8 cm altis molliter albo-lanatis; foliorum laminis oblongis, 3—6 cm longis, 5—6 mm latis, in apice obtusis, in basi ad petiolos obscuros angustatis, marginibus subrectis, crenulatis, pagina superiore bullulato-rugosa, villosula, inferiore albo-lanata; floribus (?) solitariis in bracteorum subfoliosorum 3—9 mm longorum axillis dispositis, verticillastris paucis inter se 3—12 mm distantibus; calycum florentium tubo extus sparse villoso 3 mm longo, dentibus in basi deltoideis acuminato-subspinosis 2,5 mm longis, sinibus mediis latioribus, in maturitate non visis verisimiliter habitu *S. tomentosae*; corollarum tubo circiter 6 mm longo, intus ad basim ut videtur annulato; staminibus ad tubi medium sitis; nuculis non visis.

Colombia: In Sierra de Santa Marta, Simons.

3. **L. salviaefolia** Epl. l. c. 85, 23, 1935. — *Sideritis salviaefolia* Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. Pl. 2, 307, 1817. — *Sphacele salviaefolia* Benth., Lab. Gen. et Sp. 567, 1834 et in DC., Prodr. 12, 256, 1848. — *Alguelagum salviaefolium* Kuntze, Rev. Gen. 2, 511, 1891.

Frutex aromaticus altitudine ad 2 m ramis teretibus cortice discedente, ramulis puberulis quadratis; foliorum laminis 6—12 cm longis, 2—5 cm latis, oblongo-lanceolatis, in apice subacutis, in basi vel rotundato-truncatis vel rotundato-angustatis, subinde ad petiolos puberulos 1—1,5 cm longos coarctatis, margine crenata, pagina superiore atro-viride bullato-rugosa glabra, inferiore plumbea pulchre reticulato-venulosa minute et dense tomentosa; floribus in paniculis saepius ternatis ramulis lateralibus 3—5 cm longis confertis, verticillastris densis approximatis 3—9-floribus bracteis 5—10 mm longis submembranaceis ovato-lanceolatis subtentis; calycibus campanulato-tubulosis bracteisque

saepius caerulescentibus villosulo-puberulis, pedicellis 2 mm longis elatis, florentium tubo 4—5 mm longo, in maturitate 8 ad 9 mm longo, dentibus 6—8 mm longis anguste lanceolato-acuminatis attenuatis subaequalibus; corollis albido-caerulescentibus campanulato-tubulosis villosulo-puberulis subtus prope annulum leniter saccatis 7—9 mm longis, labia superiore bifida, circiter 1 mm alta, inferiore paulo longiore; nectarostegio annulato imperfecto supra tubi basim 2—3 mm posito; staminibus minutissimis 1.5 mm longis subaequalibus in tubo inclusis ad medium sitis; nuculis atris laevibus obovatis vix 2 mm longis.

Colombia: Cundinamarca: In collibus aridis prope Bogota, 2700—3300 m, Mrs. Tracey; prope Bogota, 10. XI. 1852, Holton 486: prope Bogota, 2700 m, Triana: ad Guadalupe prope Bogota, Linden 770; prope Bogota, X. 1844, Goudot: prope Bogota, 1918, Fr. Ariste-Joseph A 306; prope Bogota, 2800 m, Idinael 10; prope Bogota, V. 1923, Pring 102; prope Bogota, Bonpland 3302; in viam ad Llanos de San Martin, VIII. 1868, Stubel 177; Norte de Santander: in paramo de Romeral, 3800—4200 m, 30. I. 1927, Killip et Smith 18681.

Venezuela: Merida: Paramos inter Santo Domingo et Chacopo, 2950 m, 14. IX. 1922, Jahn 1119; prope Caracas, Linden 485 (specimens in early flower but apparently this species).

4. **L. bullata** Epl. l. c. 85. 24. 1935. — *Sideritis bullata* Kunth l. c. **2**, 306, 1817. — *Sphacele parviflora* Benth. l. c. **12**, 256, 1848. — *A. bullatum* Kuntze l. c. **2**, 511, 1891. — *S. bullata* Benth. l. c. 568, 1834. — *A. parviflorum* Kuntze l. c. 511, — *S. Lindeniana* Briq. in Ann. Conserve. et Jard. Bot. Genève **2**, 180, 1898. — *A. Lindenianum* Briq.. l. c. (nomen).

Frutex odore Salviae aromaticus etiam arbuscula altitudine ad 5 m ramorum cortice discedente, ramulis pilis ramosis tomentosis; foliorum laminis 10—18 cm longis, 4—9 cm latis, maximam partem ellipticis frequenter elliptico-lanceolatis, in apice saepius leniter acuminatis, acutissimis, in basi ad petiolos 1—2 cm longos attenuatis, marginibus regulariter serrato-crenulatis, pagina superiore viride glabra bullulata, inferiore cinereo-pubescente; floribus in paniculis amplis tomentellis ramosioribus ramulis ad 15 cm longis dispositis; verticillastris densis approximatis saepius 6-floribus, bracteis flores subaequantibus submembranaceis subtentis; calycum florentium campanulatorum tubo 2,5 mm longo, extus hirtello et glandulis sessilibus consperso, dentibus ovato-acuminatis circiter 1,5 mm longis, in maturitate tubo subcylindrato-inflato nec tumido, membranaceo, 6—7 mm longo,

dentibus paulo auctis tribus posticis leniter connatis, omnibus acutissimis; corollarum albarum tubo 3—3,5 mm longo, intus ad staminum inferiorum bases pubescente; staminibus minutissimis ad tubi medium sitis; nuculis obovatis atris laevibus 1,5 mm longis.

In describing *Sideritis bullata*, Kunth confused two species which were later described as *Sphacele conferta* and *S. parviflora* by Bentham. It would seem either that Bonpland's collection was a mixed one or that the labels were confused. The most certain type is that specimen in the Kunth herbarium which is conspecific with *S. parviflora*; I have accordingly preferred it as the standard. The type locality cited is not improbably that of another collection now at Paris. I can perceive no marked differences in the Venezuelan plants described as *S. Lindeniana*.

Venezuela: Prope Caracas, Linden 145; in locis alpinis prope Coloniam Tovar, Moritz 997; in Silla de Caracas, 21. V. 1874, Kuntze Hb. 1658; prope Coloniam Tovar, Fendler 868; ad Agua de Obispo, 2500 m, 24. IX. 1922, Jahn 1170; in paramo de la Culata, prov. Merida, Moritz 997; in paramos inter Sto. Domingo et Chacopo, Merida, 3300 m, Jahn 1129. — Colombia: Santander: Prope San Pedro, 3000—3300 m, 25. XII. 1877, Kahlbreyer 480; Santander del Norte: prope Ocana, 3000—3300 m, Kahlbreyer 480; Cundinamarca: prope Bogota, 2700 m, Triana: prope Bogota, Goudot; Caldas: prope Saliento, 25.—31. VII. 1922, Pennell, Killip et Hazen 8747; El Cauca: in fruticetis machimbi dictis inter Quatro Esquinas et Rio Piendama, 1700 ad 1900 m, 6. VI. 1922, Pennell et Killip 6398, 6383; in dumosis prope Saliento, 2200—2400 m, 27. VI. 1922, Pennell et Killip 7278; prope Mozoco in valle Moras, 2700 m, 4. II. 1906, Pittier 1331; in montibus Popayan, Hartweg 1348 (partim); in andibus quindiuensibus, Bonpland; in montibus Popayan, Lehmann 5504.

5. **L. conferta** Epl. l. c. 85, 25, 1935. — *Sphacele conferta* Benth., Pl. Hartw. 244, 1846 et l. c. 12, 256, 1848. — *Alguelagum confertum* Kuntze l. c. 2, 511, 1891.

Frutex vel arbuscula altitudine ad 4 m, ramulis pubescentibus; foliorum laminis 8—12 cm longis, 3—5,5 cm latis, maximam partem oblongo-lanceolatis, rarius ovatis, in apice acutiusculis, in basi truncato-subsagittatis, margine leniter convexa crenulata, pagina superiore glabra bullulata, inferiore pallidiore pubescente, petiolis 1,5—3 cm longis elatis; floribus in paniculis densis confertis, verticillastris congestis bracteis ovatis calyces maturos saepius aequantibus subtentis; calycum florentium tubo 2—2,5 mm longo, dentibus 1—1,5 mm longis anguste deltoideis acutis

rarius obtusis, in maturitate tubo 5—6 mm longo inflato vix tamen tumido, dentibus paulo auctis: corollarum tubo 4 mm longo, nectarostegio intus inter filamentorum anticorum bases e pilis brevibus constaturo; staminibus ad tubi medium sitis, e tubo subexsertis; nuculis 1,5 mm longis obovatis atris laevibus.

Colombia: Norte de Santander: In declivitate orientale paramo de Santurban ad Mutiscua, 3600—3900 m, 20. II. 1927, Killip et Smith 19614; prope San Cristobal, XI. 1911, Fr. Apollinaire et Arthur 62; El Cauca: in apertis ad Rio Anambiu, 2900—3200 m, 11.—16. VI. 1922, Killip 6763; prope Popayan, 1700—2400 m, Lehmann 4952; in declivitate occidentale Cordillera Centr. prope Silvia, 2500—3000 m, 25. VIII. 1881, Lehmann 859; prope vicum Pitayo Hartweg 1348 (partim).

6. **L. paniculata** Epl. l. c. 85, 26, 1935. — *Sideritis paniculata* Kunth l. c. 2, 307, 1817. — *Sphacele paniculata* Benth. l. c. 568, 1834 et l. c. **12**, 256, 1848. — *Alguelagum paniculatum* Kuntze l. c. **2**, 511, 1891. — *S. Sprucei* Briq. l. c. **2**, 178, 1898. — *A. Sprucei* Briq. l. c. (nomen). — *S. Jamesonii* Briq. l. c. **2**, 179, 1898. — *A. Jamesonii* Briq. l. c. (nomen). — *S. intermedia* Epl. in Ann. Mo. Bot. Gard. **13**, 60, 1926.

Frutex altitudine ad 2 m ramulis incanis; foliorum laminis 4—10 cm longis, 3—6 cm latis nunc oblongis nunc ovatis, in apice obtusis, in basi nunc truncato-subcordatis nunc truncato-constrictis et in petiolos 1—1,5 cm longos abrupte extenuatis, marginibus convexis irregulariter crenulatis, pagina superiore subglabra bullato-rugosa, inferiore incano-tomentella praesertim ad venas floccosa; floribus in paniculis nunc brevibus confertioribus nunc amplis diffusioribus etiam submoniliformibus; verticillastris densis nunc approximatis et inter se 0,5—1 cm distantibus nunc confertis, bracteis subrotundis flores subaequantibus subtentis; calycibus subsessilibus turbinato-campanulatis florentium tubo 2—2,5 mm long, dentibus deltoideis maximam partem obtusis 0,5—1 mm longis, tribus posticis in basi connatis, in maturitate tubo circiter 4 mm longo, dentibus vix mutatis; corollarum tubo 2,5—3 mm longo, nectarostegio e pilis brevibus inter filamentorum anticorum bases constaturo; staminibus ad tubo medium sitis e tubo leniter exsertis; nuculis obovatis atris laevibus circiter 1,5 mm longis.

As in the case of *S. bullata* Kunth apparently confused two species, namely *S. paniculata* and *S. conferta*. It has seemed most satisfactory to choose as the type that specimen at Berlin in the

Kunth herbarium. This is conspecific with the species described by me as *S. intermedia*.

I can perceive no greater differences between the types of *S. Jamesoni* and *S. Sprucei* than might be expected between branches on the same plant. However, the inflorescenses of both are more open and graceful than in *S. paniculata*. Except for this difference in the degree of density in the inflorescence I see but little reason for maintaining these proposed species.

Ecuador: Inter Otavalo et Malchingui, 2400—3000 m, 12. IV. 1923, Hitchcock 20839; ad Tablon de Ona, 27. IX. 1918, Rose 23068; in monte ignivomo Imbabura, 7000—9000 ped., IV. 1859, Wagner; prope Quito, Jameson 148; in andibus sine loco, Spruce 6090; prope Quito, Bonpland; ad pagum Baños, 1800 m, 21. II. 1920, Holmgren 353; (?) inter San Lucas et Ona, 2200 ad 3100 m, 7. IX. 1923, Hitchcock 21577 (referred here with much doubt).

7. **L. mutica** Epl. l. c. 85, 22, 1935. — *Sphacele mutica* Benth., Pl. Hartweg. 145, 1844 et l. c. 12, 256, 1848. — *Alguelagum muticum* Kuntze l. c. 511, 1891.

Frutex altitudine ad 2 m ramulis canescenti-puberulis; foliorum laminis 5—9 cm longis, 1—2 cm latis, oblongo-lanceolatis, in apice obtusiusculis, in basi ad petiolos circiter 0,5 cm longos angustatis, margine obscure crenulata, pagina superiore bullulato-rugosa hirtella, inferiore praesertim juvencum cinereo-tomentella; floribus in paniculis bellis confertis, verticillastris approximatis congestis, bracteis parvis subrotundis flores vix aequantibus subtentis; calycum florentium tubo circiter 1,5 mm longo tomentello, dentibus deltoideo-muticis 0,5—1 mm longis, in maturitate tubo 3,5 mm longo; corollarum tubo 2,5—2,8 mm longo, nectarostegio e pilis brevibus inter filamentorum anticorum bases constaturo; staminibus ad tubi medium sitis, vix e tubo exsertis; nuculis obovatis 1,5 mm longis, laevibus, fuscis.

Ecuador: In montibus prope Loja, Hartweg 809; prope Loja, Lehmann 4954; prope Loja, IX. 1864, Jameson; prope Loja, 29. IX.—3. X. 1918, Rose 23277; prope Loja, Seemann 717.

Salvia L.

Salvia L., Sp. Pl. 23, 1753 et Gen. Pl., ed. V, 15, 1754.

Sect. *Calosphace*.

Sa[illegible] ect. *Calosphace* Benth., Lab. Gen. et Sp. 198, 1833.

[illegible] ae habitu polymorphae nunc herbae tenellae rarius ann[illegible] nc frutices robusti tamen a caeteris facile distinguendae;

foliis variis maximam partem ovatis nunc tenuibus nunc subcoriaceis rugosis etiam bullatis saepius petiolatis: floribus rarius in foliorum axillis maximam partem in spicis saepius interruptis rarius congestis interdum in racemis dispositis, bracteis saepius deciduis subtentis: calycum labia superiore maximam partem integra frequenter trimucronata, 3—9 venis, inferioris laciniis saepius ovatis; corollarum vel coccinearum vel caerulearum interdum albidarum vel rosearum tubo cylindrato nunc recto nunc flexuoso interdum sub labiam inferiorem ventricoso, intus nudo vel papillis rarius rugis transversis ornato, frequenter subtus ad basim invaginato, labia superiore erecta plus minusve galeata, inferiore trifida lacinia media majore interdum emarginata; staminibus duobus sub labiam superiorem ascendentibus nunc exsertis nunc inclusis filamento pro rata brevissimo, connectivo („jugo") elongato in tubum porrecto infra connexum dilato („gubernaculo") et longitudinaliter connato vel integro vel ad connexum in dentem dilato, loculo infimo abortivo rarissime fecundo; styli nunc pilosi nunc glabri ramis planis postico saepius longiore; gynobasi incrassata et postice dilatata („cornu"); nuculis ovatis madefactis pelliculo (? semper) obtectis hilo obscuro parvo in basi posito.

Stamina sub labiam superiorem ascendentia et e labia patentim exserta
  Corollarum tubi intus infra medium modo papillis binis vel quatuor modo rugis binis transversis ornati
    Bractea perstata; calyces extus pilis longioribus extensis glandulosis viscidi . . . . *S. hirtella*
    Bractea decidua; calyces glabri nisi rubro-villosi eglandulosi
      Calyces rubro-villosi . . . . *S. derasa*
      Calyces glabri
        Folia plerumque elliptica in basi angustata . . . . *S. pauciserrata*
        Folia plerumque ovata in basi rotundata *S. calocalicina*

Corollarum tubi intus omnino nudi
  Calycum labia superior imprimis 3-venis
    Styli ad apices pilosi; corollae rubrae vel coccineae
      Corollarum tubi 27—38 mm longi; calyces florentes 12—16 mm longi

Corollarum tubi 27—30 mm longi; staminum gubernacula 14—15 mm longa; foliorum laminae superiores hirsutae . *S. colombiana*

Corollarum tubi 35—38 mm longi; staminum gubernacula 18—21 mm longa; foliorum laminae superiores etiam juvenum glabrae atro-virides . . . . *S. melaleuca*

Corollarum tubi 18—24 mm longi; calyces florentes 7—10 mm longi . . . . . . *S. rubescens*

Styli glabri; corollae atro-cyaneae flexuosae

Staminum juga 17—18 mm longa . . . *S. cyanocephala*

Staminum juga 35—42 mm longa . . . *S. pichinchensis*

Calycum labia superior 5—7-venis

Corollarum caerulearum tubi 3,5—6 mm longi; styli glabri ramus posticus saepius brevior etiam subnullus

Folia palaeforma; flores oppositi; staminum gubernacula quam connectiva duplo breviora . . . . *S. palaefolia*

Folia ovata vel deltoideo-ovata; flores 2—6 in verticillastris et ultra; staminum gubernacula connectiva subaequantia . *S. occultiflora*

Corollarum tubi 10—43 mm longi

Corollae caeruleae (rarius albidae); styli glabri

Flores oppositi in bracteorum deciduorum solitarii

Plantae procumbentes subrepentes in nodis inferioribus radicantes . . . *S. scutellarioides*

Plantae erectae in basi suffruticosae rarius frutices

Folia magnam partem 4—6 cm (rarius 9 cm) longa pulchre deltoideo-sagittata marginibus rectiusculis *S. rumicifolia*

Folia magnam partem 8—15 cm etiam 20 cm longa nunc deltoidea nunc hastata rarius cordata

Corollarum tubi 16—18 mm longi; labia inferiore 8—12 mm longa; staminum juga 25—26 mm longa *S. macrophylla*

Corollarum tubi 18—20 mm longi, labia inferiore 13—16 mm longa; staminum juga 35—40 mm longa *S. Funkii*

Flores 3—6 et ultra in verticillastris; folia ovata vel ovato-cordata
Corollarum tubi flexuosi recurvo-ascendentes; staminum connectiva fere ad medium connexa . . . . *S. Lobbii*
Corollarum tubi recti; staminum connectiva fere ad basim connexa gubernaculo itaque pro rata breviore *S. macrostachya*
Corollae rubrae vel coccineae
Flores oppositi in axillis solitarii . . *S. squalens*
Flores 3—6 in verticillastris
Styli saepius glabri
Calycum labia superior quam inferioris laciniae patentim longior; corollarum labia inferior quam superior longior . . . . *S. Sprucei*
Calycum labiae subaequilongae vel superior brevior; corollarum labia inferior quam superior brevior
Calyces florentes 8—11 mm longi vel glabrati vel pilis brevibus hirtelli nonnulli pilis extensis glandulosis conspersi
Rami superne fere glabri villosi nec glandulosi . . . . *S. quitensis*
Rami superne pilis longioribus capitato-glandulosis mucidi . *S. hirta*
Calyces florentes 12—14 mm longi extus pilis longioribus solum capitato-glandulosis vestiti . . *S. trachyphylla*
Styli saepius hirtelli vel pilosi
Stamina ad tubi medium posita; corollarum labia inferior incurva
Corollarum tubi 27—30 mm longi *S. colombiana*
Corollarum tubi 35—38 mm longi *S. melaleuca*
Corollarum tubi 18—24 mm longi *S. rubescens*
Stamina ad fauces posita; corollarum labia inferior deflexa . . *S. coccinea*
Stamina sub labiam superiorem ascendentia et in galea omnino inclusa
Calycum labia superior imprimis 3-venis
Corollarum tubi intus ad basim papillis binis vel quatuor interdum rugis ornati (vide etiam invaginatas species seq.)

Corollarum labia inferior quam superior patentim longior
  Corollarum tubi 7—9 mm longi; calyces florentes 5,5—7 mm, maturi 7,5 ad 8 mm longi . . . . *S. carnea*
  Corollarum tubi 11—15 mm longi; calyces florentes 7—8,5 mm, maturi 9—11 mm longi
    Folia in basi cordata plus minusve pubescentia . . . . *S. Killipiana*
    Folia in basi rotundata glaberrima . *S. debilis*
Corollarum labia inferior quam superior subaequilonga vel brevior
  Folia ovata in basi rotundata interdum rotundato-angustata; corollae roseo-purpureae
    Corollarum tubi 10—12 mm longi . . *S. sordida*
    Corollarum tubi 15—16 mm longi
      Calyces florentes 7,5—8 mm longi; folia subtus molliter pubescentia . . . *S. rufula*
      Calyces florentes 9—10 mm longi; folia subtus dense molliterque tomentosa *S. tolimensis*
    Folia anguste ovata vel elliptica in basi ad petiolos angustata etiam extenuata breviter petiolata; corollae coccineae
      Flores in foliorum axillis dispositi . *S. latens*
      Flores in bracteorum deciduorum axillis dispositi
        Folia cordata; pedicelli maturi quam calyces longiores . . . . *S. erythrostoma*
        Folia ovata vel elliptica in basi angustata; pedicelli maturi quam calyces breviores
          Calycum venae incrassatae extus hispidulo-muriculatae . . . . *S. costata*
          Calycum venae vix costatae extus fere glabrae laeves . . . . . . *S. laurifolia*
Corollarum tubi intus epapillati frequenter tamen invaginati
  Pili ramosi . . . . *S. axilliflora*
  Pili simplices
    Stamina ad tubi medium posita; corollarum labia inferior incurva

Stamina sub labiam superiorem inclusa; corollarum labia superior 3—9 mm alta
  Corollarum tubi 27—38 mm longi: calycum florentes 12—16 mm longi
    Corollarum tubi 27—30 mm longi: staminum gubernacula 14—15 mm longa . . . . *S. colombiana*
    Corollarum tubi 35—38 mm longi; staminum gubernacula 18—21 mm longa . . . . *S. melaleuca*
  Corollarum tubi 18—24 mm longi; calyces florentes 7—10 mm longi . *S. rubescens*
Stamina in corollarum tubo inclusa; corollarum labia superior 1—1,5 mm alta . . . . *S. orthostachys*
Stamina ad fauces posita; corollarum labia inferior deflexa
  Corollarum labia inferior quam superior brevior vel subaequilonga
    Corollae roseo-purpureae
      Corollarum labia superior 3—6 mm alta
        Folia subtus molliter pubescentia. *S. camaraefolia*
        Folia subtus glabra nisi ad venas hirtella
          Corollarum tubi 12 mm longi; folia rotundato-ovata 6—8 cm lata *S. secundiflora*
          Corollarum tubi 18 mm longi; folia in basi cuneato-angustata . . *S. venulosa*
      Corollarum labia superior 10—16 mm alta
        Corollarum tubi circiter 17 mm longi: folia subtus saepius glabra ad venas hirtella, venis elevatis transversis prominulis . . . . *S. pseudolantana*
        Corollarum tubi 20—26 mm longi
          Folia saepius tomentosa in basi rotundata . . . . *S. tortuosa*
          Folia saepius glabra in basi ad petiolos cuneato-angustata . *S. moschata*
    Corollae atro-cyaneae . . . . *S. ecuadorenses*
  Corollarum labia inferior quam superior longior

Corollarum caerulearum tubi 15 ad 21 mm longi
Corollarum tubi 15—18 mm longi; folia rotundato-cordata in apice caudato-acuminata . . . . . . *S. ampelophylla*
Corollarum tubi 17—21 mm longi; folia ovato-cordata in apice acuminata . . . . *S. amethystina*
Corollarum caerulearum vel pallidarum (rosearum *S. intonsae*) tubi 3,5—14 mm longi
Corollarum tubi 13—14 mm longi
Folia elliptica vel elliptico-lanceolata; calycum labia superior acuminata . . . . *S. sphacelioides*
Folia ovata vel ovato-elliptica; calycum labia superior truncato-rotundata abrupte mucronata subcaudata . . . . *S. ocimifolia*
Corollarum tubi 3,5—9 mm longi
Flores rosei . . . . *S. intonsa*
Flores caerulei
Folia plerumque in basi acuminato-extenuata
Folia subtus pubescentia
Plantae venezuelanae . . . . . *S. angulata*
Plantae colombianae . . . . . *S. bogotensis*
Folia subtus glabra vel ad venas minute hirtella
Folia ovata 3—7 cm lata; corollarum tubi 4—5 mm longi . . *S. longimarginata*
Folia elliptica 1,5—2,5 cm lata; corollarum tubi 6—7 mm longi *S. laxispicata*
Folia plerumque in basi rotundata interdum angustata nullomodo extenuata
Corollarum tubi 3,5—4 mm longi . *S. tiliaefolia*
Corollarum tubi 4,5—8 mm longi .
Folia subtus glabra . . . . . . *S. membranicalyx*
Folia subtus solum ad venas hirtella . . . . *S. obrallata*
Calycum labia superior 5—9-venis et ultra
Flores in glomerulis bracteis perstatis rarius

tarde deciduis subtentis vel in foliorum axillis dispositi
Pili foliorum ramosi; styli pilosi
Calycum pili simplices . . . . *S. cyanotropha*
Calycum pili ramosi . . . . *S. flocculosa*
Pili foliorum simplices; styli glabri
Staminum gubernacula geniculata et in dentem assurgentem producta
Calyces maturi vix 3 mm longi; labia superiore rotundata . . . . *S. occidentalis*
Calyces maturi 5,5—7 mm longi; labia superiore mucronata . . . . *S. riparia*
Staminum gubernacula integra
Herbae insulanae tenellae prostratae . . *S. prostrata*
Herbae continentis procerae floribus coccineis . . . . *S. vestita*
Flores bracteis caducis vel deciduis subtenti
Staminum gubernacula geniculata et in dentem assurgentem producta; styli hirtelli ramus posticus longior
Pili simplices glandulosi
Folia oblongo-lanceolata 6—12 cm longa *S. corrugata*
Folia ovata 1,5—4 cm longa . . . . *S. ochrantha*
Pili minuti ramosi . . . . *S. Humboldtiana*
Staminum gubernacula integra vel ad connexum in dentem extensum vel retrorsum producta
Styli ramus posticus quam anticus patentim brevior; corollae caerulcae
Herba venezuelana . . . . *S. occultiflora*
Herba Galapagos insularum
Folia subtus tenue cinereo-pubescentia *S. pseudoserotina*
Folia subtus dense minute albo-tomentella . . . . *S. insularum*
Styli ramus posticus quam anticus patentim longior
Pili ramosi . . . . *S. leucocephala*
Pili simplices
Corollae coccineae vel rubrae tubi 38—52 mm longi
Calyces inflati subglobosi venulosi . *S. libanensis*
Calyces tubulosi nullomodo inflati . *S. vestita*
Corollae caeruleae vel pallidae tubis 6 mm longis . . . . *S. loxensis*

Subsect. *Microsphace.*

1. **S. occidentalis** Sw., Prodr. Veg. Ind. Occ. 14, 1788. — *S. procumbens* Ruiz et Pavon, Fl. Peruv. 1, 27, 1798.

Herba annua diffusa et procumbens etiam subscandens altitudine 30—40 cm et ultra, ramis ad apices ascendentibus gracilibus nunc pilis crispulis ad facies hirtellis nunc glabris superne inter flores plus minusve glandulosis; foliorum laminis 2—6 cm longis, late ovatis vel subrhomboideis acutiusculis, in basi cuneato-angustatis, margine convexiuscula, supra medium crenato-serratis, pagina superiore pilis appressis conspersa, inferiore hirtella, ambobus interdum omnino glabris, petiolis ad 1 cm longis elatis; verticillastris maximam partem sexfloribus, bracteis late ovatis abrupte acuminatis 2—2,5 mm longis perstatis subtentis, in racemis gracillimis 10—30 cm longis dispositis; calycibus florentibus 2 mm longis, ovato-cylindratis, extus pilis capitatis hispido-glandulosis, labia superiore truncata, obscure trimucronata, inferioris laciniis acuminato-ovatis 0,5 mm longis nullomodo spinosis, in maturitate calycibus vix 3 mm longis, labiis compressis, pedicellis 1,5—2 mm longis elatis; corollarum tubo cylindrato 2,5 mm longo labia superiore 1,5 mm longa concava erecta, labia inferiore 2,5 mm longa.

Per Americam calidiorem a Florida (Miami) usque ad Bolivia (La Paz) disseminata est.

2. **S. riparia** Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. Pl. 2, 300, 1817. — *S. privoides* Benth., Bot. Voy. Sulph. 150, 1844. — *S. lateriflora* Fern. in Proc. Am. Acad. 35, 494, 1900.

Herba annua diffusa et procumbens altitudine 30—50 cm ramis ascendentibus gracillibus pilis crispulis pubescentibus rarius subglabris; foliorum laminis 2—3 cm longis, ovatis, acutiusculis, in basi cuneato-angustatis etiam extenuatis, margine supra medium convexiuscula, crenato-serrata, pagina superiore subhirsuta, inferiore saepius cinerea, petiolis ad 1 cm longis elatis; floribus 1—12 in verticillastris bracteis 3—3,5 mm longis erectis perstatis ovato-acuminatis acutissimis subtentis, in spicis interruptis gracilibus 10—20 cm longis dispositis, extus pilis capitatis hispido-glandulosis, in maturitate 5,5—7 mm longis, labiis divergentibus, superiore vel rotundata vel truncata, 1—3-mucronata, inferioris laciniis acuminato-ovatis spinosis, ore lateraliter compresso, pedicellis 2—3 mm longis elatis; corollarum tubo 2,5—3 mm longo, labia superiore vix 2 mm longa, inferiore 3 mm longa.

Ecuador: Huataxi, in pascuis saxosis, VIII. 1859, Spruce 5988. — Venezuela: Inter Turinero et Chuao, 1500 m, IX. 1899,

Preuss 1673; prope coloniam Tovar, 1854-5, Fendler 877; ad Sabana Grande, in savannes, D. F., 11. XII. 1921, Pittier 9926. — Colombia: Ocana: Ad Ocana, 4000 ped. 1850, Schlim 154; Antioquia: Rio Medellin in arenosis, 1500 m, 13. XI. 1930, Archer 671; ad viam graminosam, Botero, 1300—1400 m, 27. IX. 1922, Pennell 10976; Huila: in collibus ad Neiva, 900—1200 m, 1.—8. VIII. 1917. Rusby et Pennell 1090; Cauca: La Manuelita ad Palmira. 1100—1300 m, XII. 1905, I. 1906, Pittier 856; Yaloco. 29. III. 1876, André 2450; El Valle: in collibus ad Cali, 1050 ad 1100 m, Killip et Hazen 11060; Santander: inter El Roble et Tora, 1500—1900 m, 17. II. 1927. Killip et Smith 19416.

Subsect. *Tomentellae*.

3. **S. Humboldtiana** Dietr., Nachtr. Gaertn. Lex. 7, 419, 1821. — *S. pulchella* Kunth l. c. 2, 288, t. 140, 1817. — *S. spicata* Schult., Mant. 1. 202, 1822. — *S. Humboldtii* Spreng., Syst. 1, 64, 1825. — *S. saligna* Willd. ex A. Dietr., Sp. Pl. 1, 307, 1839.

Frutex pulcher ad 2,5 m altitudine ramulis pilis ramosis flocculoso-puberulis superne floccoso-tomentellis; foliorum laminis petiolis 1—3 mm longis elatis, 1.5—5,5 cm longis, 0,5—1,5 cm latis, mollibus, oblongo-ellipticis utrimque acutis. margine subintegra, pagina superiore griseo-viride puberula, inferiore argentea pilis brevissimis ramosis dense tomentella; floribus 3—12 in verticillastris bracteis albo-tomentellis ovato-acuminatis 4—5 mm longis caducis subtentis, glomerulis in spicas 5—10 cm longas saepius approximatis rarius infimis inter se 1—3 cm distantibus; calycibus florentibus extus pilis ramosis dense tomentellis 3,5—4 mm longis, in maturitate 5 mm longis, labia superiore recurva trimucronata, inferioris laciniis 1,5—2 mm longis acutis, pedicellis 2 mm longis elatis; corollarum caerulearum tubo 3,5 mm longo intus nudo.

Ecuador: Prope Ibarra. 2000—2400 m, Lehmann 5799; ad Ambato et Latacunga, 2500—2900 m, Lehmann 5154; in planitie Pomasqui, Jameson 136; prope Guallabamba; Jameson 31; in arenosis siccis prope Pomasqui, 8000 ped., Jameson 341; in altaplanitie prope Ambato, Jameson 464; in altaplanitie prope Pomasqui et San Antonio, 8000 ped., IX. 1859, Jameson 113; in altaplanitie prope Pomasqui, 8000 ped., IV. 1859, Jameson 52; prope Ambato. III. 1859, Spruce 5947; prope Ambato, XII. 1918, Pachano 20; ad Rio Chota, 1876, André 3557; in siccis prope Ambato, 2600 m, 21. IX. 1923, Hitchcock 21708; sine loco Bonpland.

Subsect. *Corrugatae.*

4. **S. ochrantha** Epling nom. nov. per specim. idem constituta est. — *S. lutea* Kunth l. c. **2**, 297. t. 148, 1817 per specim. in Ecuador prov. Loja inter urbem Loja et montem Saraguru a Humboldt et Bonpland lectum constituta est; typum in herb. Mus. Berolin., isotypum in herb. Mus. Par. vidi (non Linn. Sp. Pl. 26, 1753).

Frutex ramosus ramis pubescentibus; foliorum laminis 1,5 ad 4 cm longis, 1—2 cm latis, ovatis, nunc obtusis nunc acutiusculis. in basi rotundato-truncatis subcordatis. margine crenata, pagina superiore viride bullato-rugosissima bullis hirtellis, inferiore molliter incano-tomentosa, petiolis 8—15 mm longis villosis elatis; floribus 3—6 in verticillastris bracteis ovatis 3—4 mm longis caducis subtentis, glomerulis inter se 1—2 cm distantibus in spicis interruptis 8—20 cm longis dispositis; calycibus florentibus 5 ad 5.5 mm longis, extus glanduloso-hispidis et glandulis sessilibus conspersis. in maturitate 8 mm longis, labia superiore mucronata, inferioris laciniis acutis mucronatis, pedicellis 4—5 mm longis elatis; corollarum albarum vel flavidarum extus glandulis sessilibus aureis conspersarum tubo 13 mm longo ad basim invaginato ventricoso, labia superiore 6 mm alta, inferiore 6—7 mm longa.

Ecuador: In monte Saraguru, 17. IX. 1918, Rose 23134; inter Loja et montem Saraguru, Bonpland 3296; inter Nabon et Ona, 1800—2700 m, Lehmann 7869; sine loco. Lobb 203; in montibus prope Loja, Jameson 133.

5. **S. corrugata** Vahl, Enum. **1**, 252, 1805. — *Sphacele Gaudichaudii* Briq. in Ann. Conserve. et Jard. Bot. Genève **2**, 182, 1898. — *Alguelagum Gaudichaudii* Briq. l. c. (nomen).

Frutex aromaticus altitudine ad 3 m ramulis dense lanatis mox subglabris. internodiis ramulorum principalium 5—10 cm longis. ramulorum lateralium 0,5—1 cm longis; foliorum laminis 6—12 cm longis, 1,5—3 cm latis, oblongo-lanceolatis acutis obtusisve, in basi rotundato-truncatis, margine crenato-serrata, pagina superiore subglabra, bullato-rugosissima, inferiore villosa vel lanata, petiolis 0,5—1,5 cm longis elatis; floribus 6—12 in verticillastris bracteis 5—10 mm longis supremis ovatis deciduis infimis subfoliosis subtentis, glomerulis in spicas cylindratas 3—8 cm longas confertis; calycibus florentibus extus viscido-lanatis 6 mm longis, in maturitate 9—10 mm longis, labia superiore 7-venis obtusa, inferioris laciniis acuminatis brevioribus, pedicellis 2—3 mm longis elatis; corollarum atro-caerulearum tubo 11 ad

13 mm longo ad basim valde constricto-invaginato ventricoso, labia superiore 7—8 mm alta, inferiore 6—9 mm longa.

Colombia: El Cauca: In fruticetis infra Pitayo, in convalle Rio Palo, Tierra Adento, 2500 m, 5. II. 1906, Pittier 1433; ad Popayan in declivitatibus occ. Paramo Guanaco, 2700—3000 m, Lehmann 4706: El Cauca: prope Pitayo, 2700—3000 m, 18. III. 1884, Lehmann 3773. — Ecuador: In monte Chimborazo, 12000 ped., Hall 4; inter Ona et Cuenca, 2700—3000 m, Hitchcock 21606; prope Cuenca, 9. IX. 1920, Holway 966; prope Cuenca, 17.—24. IX. 1918, Rose 22936; prope Canar, 15. IX. 1918, Rose 22706; in declivitatibus occ. montis Chimborazo, 3000 m, 21. XII. 1880, Lehmann 448; ad Cusatagua prope Ambato, III. 1919, Pachano 192; in monte Chimborazo, 3000 m, 7. VII. 1876, Andre 3966; in monte Chimborazo, 11000 ped., Jameson; prope Cuenca, Jameson 131; in montibus Chuguinibamba, Spruce; prope Riobamba, II. 1855, Spruce 5308; prope Quinia, 1859, Spruce 5308: prope Loja, VIII. 1867, Seemann 721; sine loco, Jos. Jussieu.

Subsect. *Micranthae*.

6. **S. prostrata** Hook. f. in Trans. Linnean Soc. **20**, 200, 1847.

Herba tenella prostrata radicans caulibus gracilibus sparse hirtellis: foliorum laminis deltoideo-ovatis, diametro circiter 1 cm, obtusis, in basi truncatis, margine convexiuscula, pro rata valde crenata, paginis ambobus sparse hirtellis, petiolis 8—10 mm longis hirtellis elatis; floribus binis in bracteorum linearium 1,5—2,5 mm longorum axillis in racemis 1,5 cm longis hirsutulis dispositis; calycibus maturis 5 mm longis; corollis nuculisque non visis.

Galapagos: James Island, X. 1835, Darwin.

7. **S. insularum** Epl. in Fedde, Rep. Beih. **85**, 66, 1935.

Herba ramis ascendentibus praecipue in sulcis pubescentibus; foliorum laminis sat tenuibus, 2—6 cm longis, 1,5—4,5 cm latis, deltoideis, in apice rotundatis obtusisve, in basi subtruncatis, margine crenata, pagina superiore fere glabra, inferiore dense minutissime albo-tomentella, petiolis 1—2 cm longis elatis; floribus 2—25 in verticillastris, bracteis ovatis acuminatis 2—4 mm longis caducis subtentis, glomerulis infimis inter se 2—3 cm distantibus, supremis in spicis confertis, pedicellis hirtellis 3—4 mm longis elatis: calycibus florentibus 4 mm longis extus hirtellis et glandulis sessilibus conspersis, in maturitate 6 mm longis, labia superiore 2 mm longa subtruncata breviter mucronata, laciniis

inferioribus 1,5 mm longis acuminatis; corollarum tubo 4,5 mm longo, superne sub labiam inferiorem dilato intus nudo, labia superiore erecta 2 mm alta, inferiore subrotunda 5—6 mm diametro.

Galapagos: Chatham Island. Wood.

8. **S. pseudoserotina** Epl. l. c. **85**. 67. 1935. — *S. floriana* Howell in Proc. Calif. Acad. Sci. **21**. 332. 1935.

Herba perennis caulibus procumbentibus crispule pubescentibus: foliorum laminis 1,5—4 cm longis. 1,5—3 cm latis late ovatis etiam subrotundis, in apice vel obtusis vel rotundatis in basi truncato-subcordatis, margine crenata, pagina superiore glabra. inferiore tenuissime cinereo-tomentella. venis prominulo-reticulatis, petiolis 1 cm longis elatis; floribus 3—4 in verticillastris bracteis lanceolatis 1—2 mm longis caducis subtentis, glomerulis inter se 2—8 mm distantibus in spicas interruptas 3—6 cm longas dispositis; calycibus florentibus 4—4,5 mm longis, extus praesertim ad venas hirtellis, 13-venis, labia superiore rotundata vix 1 mm longa, inferioris laciniis ovato-acuminatis aequilongis, pedicellis 1—2 mm longis elatis: corollarum tubo 3—3,5 mm longo, labia superiore 1,5 mm alta, inferiore 3 mm longa.

Galapagos: Charles Island, 1200—1550 ped.. 27. II. 1906, Stewart 3339: idem, 12. X. 1906, Stewart 3340.

Subsect. *Rhombifoliae.*

9. **S. occultiflora** Epl. l. c. **85**, 61, 1935.

Herba annua tenella erecta ramosa caulibus pilis brevioribus subcrispulis et longioribus glandulosis extensis sparse vestitis; foliorum laminis tenuibus 1,5—2,5 cm longis, 10—18 mm latis, ovatis, in apice obtusiusculis, in basi rotundato-truncatis, margine sat convexa fere integra, paginis ambobus breviter et sparse hirtellis, petiolis ad 1,5 cm longis elatis; floribus tribus in verticillastris bracteis caducis 1,5—2 mm longis ovatis subtentis, glomerulis demum inter se 0,5—2 cm distantibus; calycibus florentibus 5,5—6 mm longis extus ad venas pilis longioribus glandulosis sparse conspersis, in maturitate 7 mm longis, pedicellis 2—3 mm longis elatis; corollarum tubo 4 mm longo, labia superiore 2 mm alta, inferiore 3,5 mm diametro: staminibus ad fauces positis, filamentis 0,7 mm longis, jugo ad medium connexo 3 mm longo, gubernaculo 1.5 mm longo ad connexum in dentem parvum retrorsum dilato.

Venezuela: Merida: In Savannas de Lagunillas, 1000 m, X. 1921, Jahn 670.

Subsect. *Siphonantha.*

10. **S. Lobbii** Epl. l. c. 85, 126, 1936.

Frutex ut videtur ramulis villosis internodiis 2—3 cm longis; foliorum laminis 3—4,5 cm longis, 1,5—2,5 cm latis, anguste ovatis, acutis, in basi rotundato-subcordatis, margine serrata, paginis ambobus sparse villosulis inferiore pallidiore, petiolis 8—12 mm longis elatis; floribus circiter tribus in verticillastris bracteis ovatis caducis 3—4 mm longis subtentis glomerulis in spicas interruptas breves approximatis; calycibus florentibus 10 mm longis extus hirtellis et pilis glandulosis paucis conspersis, labiis 2,5 mm longis, superiore acuta 7-venis, inferioris laciniis acuminatis, in maturitate non visis; corollarum caerulearum tubo 22 mm longo intus nudo superne gradatim ampliato, labia superiore 6 mm alta, inferiore 5—6 mm longa; staminum filamentis 5—5,5 mm longis, jugo 35 mm longo ad medium connexo, gubernaculo 15 ad 16 mm longo.

? Ecuador: Sine loco, Lobb 293.

11. **S. cyanocephala** Epl. l. c. 85. 126, 1936.

Suffrutex speciosus caulibus superne molliter pubescentibus ut videtur subviscidis; foliorum laminis 7—10 cm longis, 4—7 cm latis, late ovatis, leniter acuminatis, in basi pulchre rotundatis subcordatis, margine serrata, pagina superiore subglabra, hirtella, inferiore sparse pubescente, petiolis puberulis 4—8 cm longis elatis: floribus 5—6 in verticillastris bracteis pulchre caeruleis speciosis caducis subtentis, glomerulis inter se 1—3 cm distantibus in spicas interruptas laxas ample paniculata. dispositis; calycibus florentibus extus sparse villosis 10 mm longis in maturitate 14 ad 15 mm longis chartaceis perlucidis, labiis hiantibus, superiore subrecurva 3-venis truncata mucronata. inferioris laciniis acuminatis infra medium connatis, pedicellis 10—12 mm longis molliter pubescentibus elatis: corollarum caerulearum tubo 20 mm longo intus nudo subcylindrato recurvo-ascendenti, labia superiore 4 mm alta, inferiore 5 mm longa; staminum filamentis 4,5 mm longis, jugo 17 mm longo, ad medium connexo, gubernaculo 9 ad 10 mm longo.

Colombia: Tolima: Inter La Ceja et Agua Bonita ad viam Quindio juxta Rio Tochero in silvis, 2500—3100 m, 2. VIII. 1922, Killip et Hazen 9530; in monte Quindio, 2300 m, 1853, Triana.

12. **S. pichinchensis** Benth., Pl. Hartweg. 243, 1846. — *S. siphonantha* Briq. in Ann. Conserve. et Jard. B ot. Genève 2, 172, 1898.

Frutex diffusus altitudine ad 3 m ramulis hirtellis mox glabris; foliorum laminis late ovatis 6—12 cm longis. 4—8 cm latis, breviter acuminatis acutisve, in basi nunc leniter cordatis nunc rotundatis saepius obliquis, margine serrata, paginis ambobus glabris nisi ad venas puberulis, petiolis 2—8 cm longis elatis; floribus 3—6 in verticillastris bracteis rotundo-caudatis glabris 1—2 cm longis caeruleis caducis subtentis, glomerulis demum inter se 1—1,5 cm distantibus. in spicas saepe paniculatas confertis; calycibus florentibus extus vel glabris vel hirtellis intus hispidulis 12—13 mm longis. labia superiore rotundato-mucronata, venis praecipuis 2—3. inferioris laciniis acuminatis 1,5—3 mm longis. in maturitate 15—18 mm longis, pedicellis 8—10 mm longis elatis: corollarum pulcherrime atro-caerulearum tubo 20—24 mm longo arcuato-ascendente cylindrato intus nudo superne infundibuliforme. labia superiore 11—12 mm alta, inferiore 10—12 mm diametro: staminum filamentis 4 mm longis, jugo 35—42 mm longo paulo infra medium connexo, gubernaculo 16—20 mm longo.

Ecuador: Ad viam silvestrem inter Alaspungo et Gualca. 22. V. 1920. Holmgren 638; in declivitate occ. montis Pichincha. Hartweg; ad Pichincha, Jameson 797: in silvis umbrosis montis Tunguragua, 8000—9000 ped., XI. 1859, Spruce 6087: ad Napo, Orton. — ? Colombia: In declivitate occ. montis Corazon. 22. VI. 1876, André 3663; Trintilla et Muido, 25. VI. 1876, André.

Subsect. *Macrostachya*.

13. **S. macrostachya** Kunth l. c. 2, 298, 1817.

Suffrutex altitudine ad 1,5 m ramis crassis pilosis; foliorum laminis 6—18 cm diametro, rotundato-cordatis, petiolis 2—6 cm longis piloso-villosis supremis subnullis elatis, pagina superiore molliter hirsuta, inferiore ad venas hirsuta, margine crenata; floribus in verticillastris bracteis perstatis orbiculatis acuminatis villosulis ciliatis 15—30 mm longis subtentis, glomerulis in spicas densas 10—20 cm longas confertis; calycibus florentibus 15—20 mm longis extus hispido-villosis glandulosis. in maturitate 25 mm longis, labiis 6 mm longis, superiore et inferioris laciniis acutis, pedicellis 3—4 mm longis elatis; corollarum caerulearum tubo 20 mm longo intus nudo subcylindrato. labia superiore 7 mm alta, inferiore 12—13 mm longa ampla; staminum filamentis 5 mm longis, jugo 21—24 mm longo. gubernaculo 5—6,5 mm longo.

Ecuador: Prope Quito, Bonpland 3204; prope Cuenca, Hartweg 1330. — Colombia: El Cauca: Ad Popayan prope La Cruz, VI. 1853. Triana; prope Yacuangua (Pasto), André 3175; prope Quaranda, 7. VII. 1876, André.

Subsect. *Hastatae.*

14. **S. macrophylla** Benth., Lab. Gen. et Sp. (Suppl.) 725, 1835 et in DC., Prodr. **12**, 346, 1848.

Suffrutex altitudine 1—3 m caulibus superne glanduloso-villosis; foliorum laminis membranaceis maximis 10—20 cm longis, 8—15 cm latis, nunc deltoideis nunc cordatis, leniter acuminatis, ad basim nunc rotundatis nunc subhastatis etiam truncatis, margine nunc recta nunc convexa irregulariter crenata, pagina superiore hirsuta, inferiore ad venas piloso-villosa, petiolis glanduloso-villosis ad 15 cm longis supremis subnullis elatis; floribus solitariis in verticillastris bracteis obovatis caducis 6—7 mm longis glandulosis subtentis, glomerulis inter se 0.5—2 cm distantibus in paniculis amplis viscidis dispositis; calycibus florentibus 6 mm longis, extus sordide glandulosis, in maturitate 10—12 mm longis, labia superiore subtridentata, inferioris laciniis acutis, pedicellis 6—7 mm longis elatis; corollarum tubo 16—18 mm longo intus nudo, labia superiore 6—7 mm alta, inferiore 8—10 mm longa; staminibus ad fauces positis, filamentis 2 mm longis, jugo 25—26 mm longo, gubernaculo 5—6 mm longo in basi dilato.

Colombia: In cordillera occ. 1800 m, 14. XI. 1899, Langlasse 73. — Ecuador: Inter Loja et Portovelo, 3.—6. X. 1918, Rose 23351; prope Loja, 3. X. 1918, Rose 23305; inter El Tambo et La Loma, 1000—2200 m, 3. IX. 1923, Hitchcock 21347.

15. **S. Funckii** Briq. l. c. **2**. 174, 1898.

Frutex viscosissimus altitudine ad 4 m ramis viscido-villosis sordidis; foliorum laminis sat tenuibus 6—15 cm longis, 4—14 cm latis, maximam partem deltoideis, frequenter sagittatis, raro subcordatis, in apice subacutis, in basi truncato-cordatis, angulis subacutis rarius rotundatis, margine maximam partem subrecta, pannoso-dentata, paginis ambobus glanduloso-villosis, petiolis 5—10 cm longis viscido-villosis sat crassis elatis; floribus oppositis in racemis 3—5 cm longis viscidis instructis, inter se 8—10 mm distantibus, bracteis late ovatis juvencum dense imbricatis villosis 8—9 mm longis caducis subtentis; calycibus florentibus extus sordide glandulosis purpureo-viridibus 9—10 mm longis, labiis acuminatis, in maturitate paulo auctis, pedicellis 5—7 mm longis elatis; corollarum tubo 18—20 mm longo, labia superiore 9 ad 11 mm alta, inferiore 13—16 mm longa; staminibus ad fauces positis, filamentis 3 mm longis, jugo 35—40 mm longo, gubernaculo 8—9 mm longo in basi dilato.

Venezuela: Miranda: San Sebastian ad Caracas, Funck 280; Merida: in Tonjillo ad vias, Moritz 1004; Trujillo: prope La

Puerta, 2000 m; 16. IX. 1922, Jahn 1145. — Colombia: Santander: Prope California ad marginem silvas, 2800 m; 11.—27. I. 1927, Killip et Smith 16973; ad Rio Frio, 7300 m, 17. I. 1881, Kahlbreyer 1953.

16. **S. rumicifolia** Kunth l. c. 2, 305. 1817.

Herba altitudine ad 1,5 m caulibus in basi ramosis superne pilis extensis incanis vestitis; foliorum laminis coriaceis saepius 5—6 cm longis (rarius 9 cm) 2,5—5 cm latis. pulchre sagittatis rarius hastatis in apice acutiusculis, margine fere recta irregulariter crenulata, pagina superiore bullato-rugosa hirtella viride inferiore incano-villosa, petiolis 1,5—3 cm longis elatis; floribus solitariis in verticillastris bracteis 2—3 mm longis ovatis deciduis subtentis, glomerulis inter se 0,5—1 cm distantibus in paniculis amplis viscosis saepe subcorymbosis dispositis; calycibus florentibus 5 mm longis extus sordide glandulosis, in maturitate 8—9 mm longis, labiis 3 mm altis, superiore subtridentata, inferioris laciniis acutis, pedicellis 4—5 mm longis elatis; corollarum caerulearum interdum albarum tubo 17—20 mm longo intus nudo, labia superiore 6 ad 8 mm alta, inferiore 8—9 mm diametro; staminibus ad fauces positis filamentis 2 mm longis, jugo 27—34 mm longo, gubernaculo 6—7 mm longo.

Colombia: Narino: Prope Pasto in silvis, Lobb 100; prope Pasto, André. — Ecuador: Ad Riobamba, 2800 m, V. 1921, Rimbach 141; in saepibus et arvis prope Riobamba, Hartweg 1331; in arenosis prope Riobamba et Ambato, XI. 1858, Spruce 5581; in altaplanitie Tacunga ad Cotopaxi, 7600—8000 ped., Wagner; prope Quito, Bonpland; inter Tambo de Chimborazo et Mocha, 9000—12000 ped., Wagner; prope Quito, Jameson 292; ad San Antonio de Salumbamba et Calicali, 1600—2800 m, Lehmann 6324; ad Hondonada de Guapulo in fruticetis, 2760 m, 5. XI. 1928, Firmin; in apricis circa oppidum Quito, 1. X. 1920, Holmgren 927; in locis siccis interandinis prope Riobamba, V. 1922, Mille 23; prope Ambato, XII. 1918, Pachano 70; in campis sterilibus altaplanitic ad Cotocollao, 1922, Mille 407; in altaplanitic arida prope Ambato, 8500 ped., 1924, Tate 540; prope Riobamba, 10. VII. 1920, Holway 865.

17. **S. scutellarioides** Kunth l. c. 2, 303, 1817. — *S. petiolaris* Kunth l. c. 2, 304, 1817.

Herba procumbens vel laxa caulibus ad 50 cm longis in basi prostratis in nodis radicantibus internodiis pilis extensis sparse vestitis; foliorum laminis sat tenuibus 2,5—9 cm diametro, maximam partem deltoideis interdum cordatis, in apice

obtusis in basi saepius truncato-subcordatis, margine maximam partem recta frequenter convexa, crenato-serrata, paginis ambobus sparse hirsutis, petiolis 2—10 cm longis elatis; floribus oppositis in bracteorum glandulosorum 4—6 mm longorum caducorum axillis solitariis in racemis pulchris longe pedunculatis pilis extensis glandulosis vestitis dispositis, pedicellis 4—5 mm longis elatis; calycibus florentibus extus sordide glandulosis 4,5—6 mm longis, in maturitate 7—12 mm longis; corollarum tubo 10—16 mm longo intus nudo, labia superiore 6—8 mm alta, inferiore 8—12 mm longa; staminibus ad fauces positis filamentis 2.5—3 mm longis, jugo 18—33 mm longo, gubernaculo 5—8 mm longo in basi dilato.

Colombia: Antioquia: In graminosis prope Quebrada Arquina, 1700—2000 m, 19. IX. 1922, Pennell 10766; Caldas: in humidis prope Apia, 1600—1900 m, 4.—5. IX. 1922, Pennell 10282; ad vias prope Rio Quindio juxta Armenia, 1300—1500 m, 24.—25. VII. 1922, Pennell, Killip et Hazen 11888: Tolima: ad La Trinidad, Libano, 1000—1200 m, 20.—25. XII. 1917, Pennell 3308; El Valle: ad vias prope La Cumbre, 1600—1700 m, 14.—19. V. 1922, Pennell 5667; in valle Rio Calima ad Calima, 14.—15. IX. 1922, Killip 11211; Cundinamarca: prope Bogota, IX. 1852, Holton 477; Cauca: in montibus Popayan, 1700 ad 2500 m, Lehmann 5831; in dumetis infra San Jose, San Antonio, 2300—2500 m, 1. VII. 1922, Pennell 7663; prope Huila 1600 ad 1900 m, 1. 1906, Pittier 1262; Cuesta de Tocota inter Buenaventura et Cali, 1500—1900 m, XII. 1905, Pittier 697.

Ecuador: Prope Ambato, XII. 1918, Pachano 69; in altaplanitie Quitensi, Hall 25; ad pagum Gonzanama, Seemann 714; prope Las Maquinas, 6800 ped., 19.—24. IX. 1923, Anthony 252; ad Tungurahua, 2000 m, 30. X. 1879, Lehmann 338; „Rio Magdalena", Bonpland 2057; prope Quito, Bonpland 2231; El Magdalena, 2800 m, 2. V. 1927, Firmin 102; prope Ambato, XII. 1918, Pachano 69; prope Curatagua, Tungurahua, III. 1919, Pachano 207; prope Banos, Tungurahua, 6500 ped., Tate 637; in silva humida prope San Francisco ad Ambato, 8500 ped., 1924, Tate 560; inter Malchingui et Pomasqui, Pichincha, 3000—3600 m, 15. VIII. 1923, Hitchcock 20893; prope Banos, Tungurahua, Spruce; prope Las Juntas, 29. IX. 1918, Rose 23228; prope Loja, 29. IX. 3. X. 1918, Rose 23291; prope Huigra, 21. VIII. 1918, Rose 22289; ad pagum Guapulo, Pichincha, 2500 m, 15. I. 1920, Holmgren 186; prope Loja in agris et ad vias, Hartweg 806.

18. **S. palaefolia** Kunth l. c. 2, 303, t. 157. 1817.

Herba procumbens caulibus ad 50 cm longis in basi prostratis in nodis radicantibus pilis extensis vestitis; foliorum

laminis maximam partem deltoideo-cordatis palaeformibus interdum subrotundis 2,5—6 cm diametro in apice rotundatis, marginibus crenatis convexioribus rarius subtectis vel leniter concavis, paginis ambobus plus minusve hirsutis, petiolis ad 4 cm longis elatis; floribus oppositis in bracteorum viscidorum 1,5—2 mm longorum axillis solitariis, in paniculis viscidis nunc congestis nunc diffusis dispositis; calycibus florentibus 3—3,5 mm longis extus viscido-hirtellis, in maturitate 5—6 mm longis, labia superiore rotundata obscure trimucronata, inferioris laciniis acutis, pedicellis 2—3 mm longis elatis; corollarum tubo 3—5,5 mm longo, labia superiore 2 mm alta, inferiore 4,5 mm diametro; staminibus paulo supra tubi medium positis, filamentis 1 mm longis, jugo arcuato 2,5—3,5 mm longo, gubernaculo saepius incurvo vix 1 mm longo.

Venezuela: Merida: Supra Chachopo ad radices murorum. 16. I 1929, Pittier 13164; prope Timotes ad vias et in agris, 2000 m. 23. I. 1928, Pittier 12688. — Colombia: Norte de Santander: Inter Mutiscua et Pamplona. 2700—3400 m. 23. II. 1927, Killip et Smith 19692; Santander: in valle Rio Surata, 2000—2300 m. 5./6. I. 1927. Killip et Smith 16619; prope La Baja, 2200—2600 m. 14./28. I. 1927, Killip et Smith 18014; Cundinamarca: prope Bogota, 1861, Parseval-Grandmaison: prope Chipaque, 2400 m, Fr. Ariste Joseph; ad Chapinero prope Bogota, V. 1923, Pring 81; prope Bogota, 1. X. 1852, Holton 477; prope Bogota, Weir 188; prope Bogota, Triana: inter El Charquita et Tequedama, prope Bogota. 18. XII. 1926, Niemeyer; Caldas: in silvis prope Pinares supra Salento. 2600—2900 m, 2.—10. VIII. 1922, Pennell 9212; Huila: in silvis prope Neiva, 2000—2500 m, 1.—8. VIII. 1917. Rusby et Pennell 638; Cauca: in humidis ad rivulum prope San Isidro, Purace, II. VI. 1922, Pennell et Killip 6433; prope Huila, 1600—1900 m, I. 1908, Pittier 1269; prope Popayan, Bonpland.

Subsect. *Subrotundae*.

19. **S. coccinea** Juss. ex Murr. in Comm. Goett. **1**, 8, t. 1, 1778. — *S. pseudococcinea* Jacq.. Coll. **2**, 302, 1786. — *S. rosea* Vahl, Enum. **1**, 244, 1805. — *S. glaucescens* Pohl, Pl. Bras. Ic. **2**, t. 192, 1831. — *S. ciliata* Benth., Lab. Gen. et Sp. 286, 1833. — *S. Galeottii* Mart. in Mart. et Gal. in Bull. Acad. Brux. **11**, II, 75, 1844. — *S. mollissima* M. and G. in Bull. Acad. Brux. **11**, II, 71, 1844. — *S. coccinea* var. *pseudococcinea* Gray, Syn. Fl. N. Am. **2**, 368, 1878. — *S. coccinea* var. *minima* Fern. in Proc. Am. Acad. **35**, 551, 1900.

Herba annua altitudine 30—60 cm caulibus pilis brevibus pubescentibus et maximam partem longioribus setaceis extensis plus minusve ornatis; foliorum laminis deltoideo-ovatis, petiolis 1—3 cm longis elatis, paginis ambobus pilis brevibus crispis plus minusve pubescentibus, et frequenter pilis setaceis conspersis, inferiore cinerea interdum incana, marginibus crenato-serratis; floribus 3—6 et ultra in verticillastris bracteis acuminato-ovatis frequenter subperstatis subtentis, in spicis interruptis dispositis; calycibus florentibus circiter 7 mm longis extus crispo-hirtellis et saepe superne ad basim pilis longioribus glandulosis conspersis, in maturitate paulo auctis, frequenter purpureis vel coccineis; corollarum pulchre coccinearum tubo 13—17 mm longo, labia superiore 3,5—5 mm longo, inferiore duplo longiore; staminibus e galea 3—4 mm exsertis, stylo hirtello.

Ubique in America calidiore.

Subsect. *Phoeniceae*.

20. **S. hirtella** Vahl, Enum. 1, 249, 1805. — *S. phoenicea* Kunth l. c. 2, 302, t. 155, 1817.

Herba pulchra radice late repente caulibus pluribus in basi procumbentibus altitudine ad 1 m et ultra sparse hispido-villosis; foliorum laminis 2—6 cm longis, 12—50 mm latis, subcarnosis, ovatis, obtusis vel rotundatis, in basi rotundatis, petiolis 1—4 cm longis elatis, margine crenato-serrata, paginis ambobus glabris, margine saepe hispido-ciliata; floribus 6 et ultra in verticillastris bracteis subrotundis margine hispido-ciliata 3—8 mm longis perstatis subtentis, glomerulis demum inter se 1—1,5 cm distantibus saepius in spicas strictas glanduloso-hispidas approximatis; calycibus florentibus 13—16 mm longis extus glanduloso-hispidis pilis frequenter in basi incrassatis coloratis, in maturitate calycibus paulo auctis, labia superiore rotundata, submucronata, inferioris laciniis acutis, pedicellis 8—12 mm longis villosis elatis; corollarum pulchre coccinearum tubo 20—23 mm longo, intus ad basim papillis duobus ornato, labia superiore 4—5 mm alta, inferiore fere 1 cm diametro, staminibus paulo supra tubi medium positis, filamentis 4—5 mm longis, jugo 24—26 mm longo ad basim connexo, gubernaculo 6—7 mm longo.

Ecuador: Ad Riobamba, 2800 m, V. 1921, Rimbach 142; prope Cuenca, Warczewiz 12; ad montem Cotopaxi, Bonpland 3125; ad radicem montis Cotopaxi, Bonpland 3121; inter Tambo de Chimborazo et Macho, 7000—12000 ped., IX. 1858, Wagner; in altaplanitie Tachunga juxta montem Cotopaxi, 7600 ped., Wagner; prope Riobamba in arenosis humidioribus, XI. 1858,

Spruce 5772; prope Quito. Hartweg 1328; prope Quito, Jameson 886; prope Guanajo, 7. VII. 1876, André 3974; ad Ambato, in altaplanitie arida, 8500 ped., 1924, Tate 532; ad Alausi, 2500 m, VII. 1923, Hitchcock 20725; prope Cumba, 24. IX. 1918, Rose 22953; ad Tilulin prope Ambato, II. 1919, Pachano 99; sine loco, Jos. Jussieu.

Subsect. *Rubescentes.*

21. **S. melaleuca** Epl. in Fedde. Rep. Beih. 85, 108, 1936.

Herba erecta perennis in basi suffruticosa altitudine ad 1,5 m caulibus superne minute puberulis; foliorum laminis 5—8 cm (et ultra?) longis 2.5—5 cm latis, ovato-cordatis, in apice gradatim acuminatis acutissimis, in basi subcordatis, margine crenato-serrata, pagina superiore atro-viride glabra, inferiore albo-tomentella venis reticulatis prominulis, petiolis ad 3 cm longis elatis; floribus 3—12 in verticillastris bracteis non visis subtentis pedicellis ad 1 cm longis elatis, glomerulis demum inter se 1—3 cm distantibus in paniculis glanduloso-hirsutis dispositis; calycibus florentibus 15—16 mm longis, extus pilis brevissimis extensis et longioribus capitato-glandulosis purpureis vestitis, labiis acuminatis; corollarum tubo sat crasso 35—38 mm longo, intus nudo, labia superiore 10—11 mm alta, leniter concavo-galeata, inferiore 20 mm longa; staminibus breviter exsertis ad tubi medium positis filamentis 10—11 mm longis, jugo 36—39 mm longo ad medium connexo, gubernaculo 18—21 mm longo.

Colombia: Norte de Santander: Inter Mutiscua et Pamplona, 3400 m, ad silvae marginem, 23. II. 1927, Killip et Smith 19735; ad Bucarasica inter Ocana et Pamplona, 7500—8000 m, in aprico ad silvae marginem, 28. XII. 1878, Kahlbreyer 872 (flores manci minores videntur).

22. **S. colombiana** Epl. l. c. 85, 109, 1936.

Suffrutex altitudine 1—2 m ramis puberulis et pilis longioribus praecipue in nodis ornatis; foliorum laminis 6—9 cm longis, 3 ad 5,5 cm latis, ovato-cordatis, acuminatis, in basi saepius obliquis subcordatis, margine serrulata, pagina superiore viride hirsuta, inferiore albo-tomentosa, ambobus mollibus, petiolis 1.5—3 cm longis elatis; floribus 6 et ultra in verticillastris bracteis subrotundis glandulosis caducis 5—7 mm diametro subtentis, glomerulis inter se 1—3 cm distantibus in spicas interruptas paniculatas 20—25 cm longas glanduloso-pilosas dispositis; calycibus florentibus extus glandulosis, 12—14 mm longis, in maturitate paulo auctis, labiis hiantibus, superiore leniter recurva, acuminata, inferioris laciniis acuminatis ad medium et ultra connatis, ambobus

4—4.5 mm longis. pedicellis 5—6 mm longis glandulosis elatis; corollarum tubo 27—30 mm longo intus nudo cylindrato, labia superiore 3—5 mm alta, inferiore 6—7 mm longa; staminibus ad tubi medium positis, filamentis 6 mm longis elatis, jugo 24 ad 25 mm longo paulo supra medium in connexo, gubernaculo 14 ad 15 mm longo.

Colombia: Santander: Prope La Baja, in apricis, 3100 m, 14.—30. I. 1927, Killip et Smith 18144; prope Vetas, in declivitatibus apricis saxosis, 16.—20. I. 1927, Killip et Smith 17898, 17318, 17319.

23. **S. rubescens** Kunth l. c. 2, 301, t. 154, 1917. — *S. truxillensis* Briq. l. c. 2. 167. 1898.

Herba perennis vel suffrutex ut videtur caulibus pubescentibus interdum tomentosis; foliorum laminis 6—16 cm longis, 4—9 cm latis, ovatis, acutis vel acuminatis, in basi leniter cordatis, margine crenato-serrata, pagina superiore hirtella, inferiore incano-tomentella interdum albo-tomentosa, petiolis 3—8 cm longis elatis; floribus 3—12 in verticillastris bracteis 3—4 mm longis, dense villoso-glandulosis caducissimis subtentis, glomerulis demum inter se 0.5—5 cm distantibus in paniculis dense glanduloso-villosis purpureis singularibus dispositis; calycibus florentibus 7—10 mm longis, purpureo-glandulosis, in maturitate 10—14 mm longis, labia superiore mucronata, inferioris laciniis acuminatis, infra medium connatis, pedicellis glandulosis 5—12 mm longis elatis; corollarum tubo 18—24 mm longo, subcylindrato, intus nudo, labia superiore 3—5 mm alta, inferiore 8—10 mm longa: staminibus non exsertis paulo ad tubi medium positis, filamentis 4 mm longis, jugo 16—17 mm longo ad medium connexo, gubernaculo 8—9 mm longo ad connexum in dentem deltoideum dilato.

Venezuela: Merida: In andibus Trujillo et Merida, 1842. Linden 378; in Paramo de los Apartaderos, 3300 m, 4. IX. 1921, Jahn 620; ad S. Rafael de Mucuchies, 6. II. 1928, Pittier 12899; in locis subalpinis, Moritz 1002; ad S. Rafael, 3185 m, 4. IV. 1930, Gehriger. — Colombia: Norte de Santander: Inter Ocana et Pamplona, Kahlbreyer 872; Cundinamarca: ad San Cristobal juxta Bogota, 2800—2900 m, 30. IX. 1917, Pennell 2301; prope San Cristobal, Cristianos 16; prope San Cristobal, Fr. Claude-Joseph; prope Bogota, Goudot; prope Bogota 21. X. 1915, Tracey 79; prope Bogota, 4. X. 1852, Holton 476; prope Bogota, 2600 m, 1855, Triana; ad Tequedama, I. 1923, Fr. Ariste-Joseph 758; El Cauca: inter Rio Piendamo et Rio Palace, 1700 ad

1900 m. 6. VI. 1922. Pennell et Killip 6395; „in regno Quitensi“, Bonpland.

24. **S. orthostachys** Epl. l. c. 85, 110. 1936.

Herba perennis altitudine ad 1,5 m caulibus superne nunc cinereis nunc incano-pubescentibus; foliorum laminis cordato-ovatis, 6—12 cm longis, 5—8 cm latis, in apice nunc obtusis nunc breviter acuminatis, in basi cordatis, margine crenato-serrata, pagina superiore cinereo-viride hirtella inferiore praesertim juvenum albotomentosa mollissima interdum in maturitate cinerea, petiolis 1—2,5 cm longis elatis; floribus numerosis in verticillastris bracteis ovato-caudatis hirtellis 6—10 mm longis caducis subtentis, glomerulis demum globosis inter se 1—2,5 distantibus in spicas interruptas strictas paniculatas angustas ad 50 cm longas dispositis: calycibus florentibus 6,5—7 mm longis rubrotinctis extus pilis extensis capitato-glandulosis et brevioribus vestitis viscidis, in maturitate 7—7,5 mm longis, labia superiore truncata, inferioris laciniis breviter acuminatis, pedicellis 2—3 mm longis elatis; corollarum tubo 12—15 mm longo intus nudo, labiis pro rata brevissimis, superiore 1,5 mm alta, inferiore 4,5 mm longa; staminibus paulo supra tubi medium positis in tubo inclusis, filamentis 2 mm longis, jugo 7—8 mm longo supra medium connexo, gubernaculo 5—5,5 mm longo.

Colombia: Norte de Santander: Inter Pamplonita et Chinacota, in valle Rio Pamplonita in dumetis, 1300—1800 m, 17. III. 1927, Killip et Smith 20746; inter Mutiscua et Pamplona in declivitate aprico, 2700 m, 23. II. 1927, Killip et Smith 19683: Santander: in declivitate occidentale Paramo de Santurban ad Tona, 2200—2800 m, 18. II. 1927, Killip et Smith 19519.

Subsect. *Biflorae*.

25. **S. squalens** Kunth l. c. 2, 297, 1817.

Herba perennis altitudine ad 2 m caulibus sordide glandulosis viscidis; foliorum laminis 4—7 cm longis, 2—5 cm latis, deltoideo-ovatis, in apice obtusis vel rotundatis, in basi cordatis, petiolis viscidis 1—3 cm longis elatis, margine irregulariter crenulata, paginis ambobus rugosis glanduloso-hispidis, inferiore saepius reticulato-venulosa: floribus solitariis in verticillastris bracteis ovato-acuminatis glandulosis caducis 7—10 mm longis subtentis, glomerulis demum inter se circiter 1 cm distantibus, in racemis strictis angustis viscido-glandulosis 10—20 cm longis dispositis; calycibus florentibus 10—15 mm longis, venis costatis, extus viscido-glandulosis, sordidis, in maturitate vix

auctis, labiis 4—6 mm longis, ovatis, acuminatis, inferioris laciniis infra medium connatis, pedicellis 5—6 mm longis elatis; corollarum tubo 22—24 mm longo, intus nudo, labia superiore 10 mm alta, inferiore circiter 10 mm diametro; staminibus paulo supra tubi medium sitis, filamentis 2 mm longis, jugo 25—30 mm longo infra medium connexo, gubernaculo 12—13 mm longo.

Ecuador: Prope Loja, Jameson 134; prope Loja, 30. X. 1876, Andre 4339; prope Nabon, 26. IX. 1918, Rose 23049; sine loco, Bonpland; inter Ona et Cuenca, 2700—3000 m, 9.—10. IX. 1923, Hitchcock 21587; inter Loja et San Lucas, 6. IX. 1923, Hitchcock 21499; prope Loja, 7300 ped., 11. IV. 1921, Popenoe; prope Loja 29. IX.—3. X. 1918, Rose 23304.

Subsect. *Cylindriflorae.*

26. **S. quitensis** Benth. in DC., Prodr. 12, 339, 1848.

Frutex speciosus elegans ramulis gracilibus nunc sparse villosis nunc subglabris; foliorum laminis 5—10 cm longis, 2—5 cm latis, nunc ovatis nunc sublanceolatis, acutis, in basi rotundatis rarius leniter cordatis, petiolis 1,5—3 cm longis elatis, margine serrata, paginis ambobus vel sparse villosis vel subglabris; floribus 1—3 in verticillastris bracteis rotundato-obovatis fere glabris ciliolatis acuminatis 8—10 mm longis caducis subtentis, glomerulis demum inter se 1—2 cm distantibus in spicas interruptas pulchras 10—20 cm longas dispositis; calycibus florentibus extus nunc glabris nunc villosis saepius purpureis margine ciliolata intus hispidula 8—11 mm longis, campanulatis, in maturitate 13 mm longis, labia superiore 3 mm longa rotundata obtusissima mucronata, inferioris laciniis breviter acuminatis, pedicellis 8—10 mm longis elatis; corollarum tubo 27—28 mm longo intus nudo, labia superiore 6—8 mm alta, inferiore subaequilonga; staminibus paulo supra tubi medium positis, filamentis 5—6 mm longis, jugo 37—40 mm longo infra medium connexo, gubernaculo 15—16 mm longo.

Ecuador: In monte Pellzhum 12000 ped., Jameson 71; in monte Chimborazo, André; in monte Corazu, 2700—2900 m, 22. VI. 1876, André 3664; prope Quito, André; in declivitatibus occidentalibus montis Pichincha, 11500 ped., VI. 1859, Jameson 105; in monte Pichincha, 12000 ped., Jameson; in declivitatibus occidentalibus Pichincha, 1836, Jameson 70; in silvis in declivitatibus occidentalibus montis Pichincha, Jameson 132; sine loco, 8000 ped., Jameson 421; prope Canar, 16. IX. 1918, Rose 22768; prope Cuenca, 15. IX. 1920, Holway 992; in valle Lloa, Hall 19; prope Cuenca, Warczewiz 11.

27. **S. hirta** Kunth l. c. **2**, 296, 1817.

Frutex ut videtur ramis gracilibus superne pubescentibus; foliorum laminis 4—8 cm longis, 2—4,5 cm latis, anguste ovatis vel ovato-lanceolatis acutis, in basi rotundatis, interdum subcordatis, margine crenato-serrata, pagina superiore hirtella subglabra, inferiore villosula, petiolis 1—3 cm longis villosis elatis; floribus 1—3 in verticillastris bracteis ovato-caudatis 5—8 mm longis hirtellis margine glanduloso-ciliata caducis subtentis, glomerulis demum inter se 1—2 cm distantibus in paniculis pilis 1 ad 2 mm longis mucidis ornatis dispositis; calycibus florentibus 10—11 mm longis, extus hispidulis et pilis glandulosis longioribus conspersis, in maturitate paulo auctis, labia superiore 2,5—3 mm longa acuminata, inferioris laciniis acuminatis paulo longioribus infra medium connatis, pedicellis 4—6 mm longis hispidulis elatis; corollarum tubo 25 mm longo intus nudo, labia superiore 4 mm alta, inferiore subaequilonga; staminibus supra tubi medium positis, filamentis 3,5 mm longis, jugo 27—30 mm longo infra medium connexo, gubernaculo 11—12 mm longo.

Ecuador: Ad Loja, 28. IX. 1918, Rose 23292; ad vicum Sasaranga, VIII. 1847, Seemann 715; sine loco, Jameson.

28. **S. trachyphylla** Epl. l. c. **85**, 119, 1936.

Frutex ut videtur ramis superne pubescentibus; foliorum laminis subcoriaceis 6,5—7 cm longis, 2,5—3,2 mm latis, ovato-lanceolatis, acutis, in basi subcordatis, petiolis 1—2 cm longis pubescentibus elatis, margine crenato-serrulata, pagina superiore subbullulata hispidulo-aspera, inferiore villosula; floribus 1—3 in verticillastris bracteis caducis non visis subtentis glomerulis demum inter se 1—3 cm distantibus, in spicas interruptas laxas pilis extensis eglandulosis sparse conspersas dispositis; calycibus florentibus extus pilis extensis glandulosis conspersis, 12 ad 14 mm longis, labia superiore obtusa, inferioris laciniis brevioribus acutis, in maturitate paulo auctis pedicellis 4—6 mm longis glandulosis elatis; corollarum tubo 25 mm longo intus nudo, labia superiore 7—8 mm alta, inferiore subaequilonga 10 mm lata; staminibus ad fauces positis, filamentis 6—7 mm longis, gubernaculo 14 mm longo.

Ecuador: Ad Cusatagua prope Ambato, III. 1919, Pachano 202.

29. **S. Sprucei** Briq. l. c. **2**, 171, 1898. — *S. Theresae* Briq. in Beih. Bot. Ctrbl. **13**, 82, tab. II, fig. 4—5, 1902. — ? *S. ayavacensis* Kunth l. c. **2**, 298, 1817.

Frutex altitudine ad 4 m et ultra ramosus aromaticus ramulis dense hirsuto-villosis; foliorum laminis 6—11 cm longis, 3,5—4,5 cm latis, anguste ovatis, acutis, in basi pulchre rotundatis, margine crenato-serrata, pagina superiore hirsuta, rugulosa, inferiore molliter tomentosa juvenum flavida, petiolis tomentosis 2—3 cm longis elatis; floribus 1—6 in verticillastris bracteis caducis non visis subtentis, glomerulis demum inter se 1—2 cm distantibus, in paniculis glandulosis dispositis: calycibus florentibus 15—17 mm longis glanduloso-pubescentibus venis costatis, in maturitate fere 2 cm longis tubulosis, labia superiore 4—5 mm longa, inferioris laciniis acutis brevioribus infra medium connatis, pedicellis 8 ad 10 mm longis glandulosis elatis; corollarum tubo 24 mm longo, intus nudo, labia superiore 6 mm alta, inferiore longiore; staminibus supra tubi medium positis, filamentis 4 mm longis, jugo 33—35 mm longo ad medium connexo, gubernaculo 15—16 mm longo.

Ecuador: Prope Llala in sylvis, VIII. 1859, Spruce 5990; prope Quaranda, André; prope S. Miguel, 10. VII. 1876, André 4011; inter Chimbo et Targe prope Chimborazo, 8000—9000 ped., IX. 1858, Wagner; prope Canar, 15. IX. 1918, Rose 22710; prope Huigra, 4. VIII. 1920, Holway 842; inter Pucara et San Antonio, Pr. Therese von Bayern; in cordillera occidentali supra Balsapampa, 2500 m, VII. 1934, Rimbach 205.

Subsect. *Flexuosae*.

30. **S. derasa** Benth., Pl. Hartweg. 242. 1846.

Suffrutex altitudine ad 3 m ramulis glabris nisi nodis villosis; foliorum laminis 6—13 cm longis, 3—11 cm latis, saepius 8—9 cm longis, 5—6 cm latis, late ovatis, breviter acuminatis, in basi rotundatis interdum subcordatis, petiolis glabratis 3—8 cm longis elatis, margine serrata, paginis ambobus fere glabris, inferiore pallidiore; floribus 1—6 in verticillastris bracteis subrotundis acuminatis 1—2 cm longis margine valde villosa caetero glabris deciduis subtentis, glomerulis demum inter se 1—3 cm distantibus, in spicas interruptas 15—20 cm longas villosas dispositis; calycibus florentibus 15—16 mm longis purpureo-villosis intus dense hispidis, in maturitate 18 mm longis, labiis ambobus acuminato-caudatis 7 mm longis, superiore 5— (? interdum 3-) venis, inferioris laciniis ad medium et ultra connatis, pedicellis pubescentibus villosisve 8—10 mm longis elatis; corollarum tubo 25 mm longo, intus ad basim papillis duobus prominulis ornato superne ampliato, labia superiore 12 mm alta, inferiore subaequilonga; staminibus vel infra medium vel ad tubi medium positis, filamentis 4—5 mm longis, jugo 36—38 mm longo ad basim connexo, gubernaculo 8—11 mm longo; stylo piloso.

Colombia: El Cauca: Popayan: Prope Pitayo. Hartweg 1327; in cord. central. ad Rio Piendama, 2600—3000 m, Lehmann 5826; in silvis densis ad Rio Ullucos, 2300 m, IX. 1887, Lehmann; in Valle de Quintero supra Pitayo, 2800 m, 4. II. 1906, Pittier 1421; prope Silvia. Lehmann 916.

31. **S. calocalicina** Briq. l. c. 2, 159, 1898.

Herba perennis altitudine ad 2 m caulibus glabris; foliorum laminis maximam partem 9—18 cm longis. 4—10 cm latis, ovatis vel ellipticis, utrimque obtusis vel in apice breviter acuminatis in basi nunc angustatis nunc rotundatis, margine serrulata. paginis ambobus viridibus glaberrimis, inferiore saepe pulchre purpurea. petiolis 2—8 cm longis elatis; floribus in spicas interruptas fere glabras 15—36 cm longas dispositis saepius bracteis ovato-caudatis glabris 10—20 mm longis subtentis, in maturitate glomerulis 1—3 cm inter se distantibus; calycibus florentibus glabris intus hispidulis 10—15 mm longis, in maturitate 15—18 mm longis labiis ambobus acuminatis subcaudatis 8—10 mm longis infra medium connatis, pedicellis 3—6 mm longis hispidulis elatis; corollarum tubo 20—46 mm longo, labia superiore 10—13 mm alta, staminibus infra tubi medium positis filamentis 3—8 mm longis, jugo 36—47 mm longo ad basim connexo, gubernaculo 8—9 mm longo pubescente in dentem parvum obtusum obscurum assurgentem dilato; stylo pubescente.

Colombia: Santander del Norte: Prope Ocana in paramos. 8000—10000 ped., Schlim 451; inter Ocana et Pamplona, 3000 m, 27. II. 1879, Kahlbreyer 996; in valle Culaga versus Labateca 1480—1550 m, 12. III. 1927, Killip et Smith 20540. Santander: inter El Roble et Tona in silvis, 1500—1900 m, 17. II. 1927, Killip et Smith 19390. — Antioquia: In Paramo de Sonson, Rio Palmas et Rio Dulce, 1500—1700 m, Lehmann 7281. — Caldas: In dumetis prope San Jose, 1400—1800 m, 3. IX. 1922, Pennell 10241; ad Rio Boquia prope Salento, 1500—1700 m, 27. VII. 1922, Killip et Hazen 8844; prope Santuario ad rivulum, 1300—1700 m, 5.—6. IX. 1922, Pennell 10295; ad silvae marginem supra Salento, 2000—2500 m, 25.—31. VII. 1922, Pennell 8901.

The specimens I have cited above exhibit a very considerable range in size of flowers yet as far as I am able to determine present no very certain lines of cleavage. At the same time they differ from *S. pauciserrata* chiefly in the broader more ovate leaves. The following specimens are practically confluent with the above.

var. **minor** Epl. l. c. 85, 128, 1936.

Foliis maximam partem 5—10 cm longis; calycibus florentibus circiter 10 mm longis, in maturitate paulo auctis; corollarum tubo quam typici graciliore 22—25 mm longo.

Colombia: El Cauca: Prope Tulua, 22. IX. 1853, Holton 482; ad San Isidro prope Purace, 2200—2500 m, 11. VI. 1922, Pennell et Killip 6459; ad La Gallera in valle Micay prope Rio San Joaquin, 1100—1300 m, 29./30. VI. 1922, Killip 7829; inter El Ramal et Rio Sucio prope Popayan, 2000—2200 m, 3. VII. 1922, Pennell et Killip 8096; Huila: prope Huila in valle Rio Paez, 1600—1900 m, I. 1906, Pittier 1244; prope Neiva. 1.—8. VIII, 1917, Rusby et Pennell 546.

In addition I have seen specimens from Ecuador collected by Lehmann and from Peru collected by Spruce which are very similar but I hesitate to refer them here. The plants recently collected by Williams at San Roque, San Martin, Peru have corollas with tubes 15 mm long; otherwise they hardly differ from the Colombian plants.

32. **S. pauciserrata** Benth., Pl. Hartweg. 241, 1846.

Frutex altitudine ad 1 m ramis gracilibus saepius sparse pubescentibus superne glandulosis; foliorum laminis 5—8 cm longis. 2—3,5 cm latis. ovato-ellipticis, leniter acuminatis, in basi rotundato-angustatis, petiolis 1,5—3 cm longis pubescentibus elatis, margine pauciserrata, paginis ambobus sparse villosis inferiore saepe violacea interdum subglabris; floribus 1—3 in verticillastris bracteis lanceolatis villosis 5—6 mm longis caducis subtentis, glomerulis demum inter se 1—2 cm distantibus, in spicas interruptas 10—15 cm longas dispositis; calycibus florentibus extus sparse pubescentibus rarius subglabris 15—16 mm longis, inferioris laciniis infra medium connatis, in maturitate non visis; corollarum tubo 35—38 mm longo, intus ad basim papillis ornato, labia superiore 10—11 mm alta, inferiore subaequilonga; staminibus infra tubi medium positis filamentis 5 mm longis, jugo 45—48 mm longo ad basim connexo, gubernaculo 10—12 mm longo pubescente in dentem parvum assurgentem ad connexum dilato; stylo pubescente.

Colombia: Prope Bogota. Tracey 53; ad pagum Tena prope Bogota, Hartweg 1325; in cordillera Bogota. Triana: Cundinamarca, prope El Colegio, VII. 1923, Fr. Ariste-Joseph 1056.

Subsect. *Flocculosae.*

33. S. cyanotropha Epl. l. c. **85**, 78, 1935.

Suffrutex altitudine ad 2 m ramis junioribus pilis ramosis vestitis demum glabratis; foliorum laminis ovatis interdum anguste ovatis, in apice acutis vel acuminatis, in basi ad petiolos 3—6 mm longos frequenter obscuros subnullos angustatis, margine serrulata, paginis ambobus juvenum pilis ramosis cinereis etiam albidis demum fere glabris; floribus 3—6 in verticillastris bracteis cyaneis ovato-lanceolatis demum deciduis 5—20 mm longis subtentis glomerulis inter se 0,5—1 cm distantibus, in spicas interruptas villosas 6—15 cm longis confertis; calycibus florentibus extus hirsutis pilis extensis 6—7,5 mm longis, in maturitate 8,5—9 mm longis cyaneis, labiis acuminatis aequilongis; corollarum caerulearum vel violacearum tubo 6—7 mm longo leniter ventricoso intus nudo, labia superiore 4—4,5 mm alta, inferiore 7 mm diametro.

Colombia: Santander del Norte: Ocana prope Santa Marta, 4000 ped., Schlim 294; prope Agua Chica, 1851, Schlim 953; Ocana, in declivitatibus apertis aridis ad vias, 4000—6000 ped., 11. X. 1877, Kahlbreyer.

34. S. flocculosa Benth. in DC., Prodr. **12**, 314, 1848. — *S. collina* Kunth l. c. **2**, 288, 1817 (non Salisb. Prodr. 73, 1796). — *S. spicata* Willd. ex A. Dietr., Sp. Pl. **1**, 277, 1831 (non Schultes, Mant. **1**, 202, 1822).

Suffrutex ramosus altitudine 1 m et ultra ramis ascendentibus pilis brevibus ramosis floccoso-incanis; foliorum laminis 2—3 cm longis, 6—15 mm latis, nunc oblongo-lanceolatis nunc lanceolatis, in apice acutiusculis, in basi rotundatis, petiolis 2—4 mm longis elatis margine integra, paginis pulchre bicoloribus, superiore viride fere glabra, inferiore pilis brevibus ramosis dense albo-tomentella; floribus circiter 6 in verticillastris bracteis perstatis lineari-lanceolatis 8—15 mm longis acutis extus pubescentibus intus glabris subtentis, glomerulis inter se 1—3 cm distantibus in spicas interruptas 8—20 cm longas dispositis; calycibus florentibus 6 ad 8 mm longis, extus floccoso-pubescentibus in maturitate 8 ad 10 mm longis, labia superiore 5—6 mm alta recurva erecta hiante ovata, inferioris acutis aequilongis, pedicellis 1—2 mm longis elatis; corollarum pulchre violacearum tubo 4—5 mm longo ventricoso intus nudo, labia superiore 4 mm alta, inferiore 8—9 mm longa.

Ecuador: Inter Lucan et Guano juxta Riobamba prope Quito, Hartweg 1347; ad Riobamba, 2800 m, Rimbach 140;

ad flumen Chambo. XII. 1858. Spruce 5822; ad Riobama. Bonpland 3192.

Subsect. *Malacophyllae.*

35. **S. loxensis** Benth., Pl. Hartweg. 145, 1844.

Herba perennis ramis gracilibus ascendentibus sparse pubescentibus; foliorum laminis 2—4 cm longis, 1,5—2,5 cm latis, ovatis, vel obtusis vel breviter acuminatis, in basi rotundatis, margine convexiore serrata, paginis ambobus praecipue ad venas sparse hirtellis subglabris, petiolis 8—12 mm longis elatis; floribus 3—6 in verticillastris bracteis 3—4 mm longis deciduis ovato-acuminatis glabris bracteolisque ellipticis subaequilongis subtentis, glomerulis inter se 3—8 mm distantibus, in spicis subsecundis confertis, etiam in paniculis dispositis; calycibus florentibus 5—6 mm longis, extus fere glabris et glandulis sessilibus conspersis, in maturitate paulo auctis, labia superiore fere 3 mm longa rotundato-truncata mucronata, inferioris laciniis acuminatis subaequilongis; corollarum tubo 6 mm longo intus nudo subcylindrato, labia superiore erecta 3,5 mm alta, inferiore subrotundo 4,5 mm diametro, lacinia media emarginata.

Ecuador: Prope Loja, Hartweg 805.

Subsect. *Fendlera.*

36. **S. axilliflora** Epl. l. c. 85, 100, 1936.

Suffrutex altitudine ad 3 m ramulis superne pilis ramosis tomentosis, mox glabris; foliorum laminis 6—12 cm longis, 3—6 cm latis, ovato-ellipticis, acuminatis, in basi ad petiolum 0,5—1,5 cm longum tomentosum extenuatis, margine serrulata, pagina superiore sparse hirsuta, inferiore molliter villosula praecipue juvenum subtomentosa; floribus circiter 6 in verticillastris glomerulis infimis frequenter omnibus in foliorum axillis supremis dispositis; calycibus florentibus extus pilis ramosis tomentosis, 7 mm longis, in maturitate 9—10 mm longis, labiis 3 mm longis, ambobus acuminato-subcaudatis, pedicellis gracilibus pubescentibus 4—5 mm longis elatis; corollarum rosearum tubo 9—10 mm longo ventricoso intus nudo, labia superiore 5 mm alta, inferiore 7 mm diametro.

Venezuela: Ad Caracas, Fendler 873; ad Sanchorquiz prope Caracas, 1400 m, 24. I. 1921, Pittier 9176; propeSanchorquiz, 5000 ped., 22. VII. 1891, Eggers 13414; prope La Guaira, Moritz 167.

Subsect. *Carneae.*

37. **S. carnea** Kunth l. c. 2, 300, t. 151, 1817.

Herba bella perennis caulibus laxis diffusis ut videtur decumbentibus superne breviter pubescentibus plus minusve glandu-

losis; foliorum laminis deltoideo-cordatis 2,5—6 cm diametro, in apice nunc obtusis nunc breviter acuminatis, in basi cordatis interdum rotundatis, margine crenata pagina superiore nunc glabra nunc molliter villosa, inferiore praesertim ad venas pilis longioribus ornata interdum fere glabra; floribus 6—12 in verticillastris bracteis ovato-acuminatis 3—6 mm longis caducis subtentis, glomerulis inter se 0,5—2,5 cm distantibus in spicas interruptas cylindratas 5—15 cm longas approximatis; calycibus florentibus saepius purpureis 5,5—7 mm longis extus nunc fere glabris nunc praesertim ad venas sparse villosulis in maturitate 7,5—8 mm longis, labia superiore 2,5 mm longa maximam partem rotundato-acuminata rarius truncato-rotundata et mucronata, inferioris laciniis paulo longioribus acuminatis, pedicellis 2—3,5 mm longis elatis; corollarum rosearum tubo 7—9 mm longo sat ampliato sub labiam inferiorem subconstricto, labia superiore 3—4 mm alta, inferiore 5 mm lata.

Venezuela: In Sierra Nevada de Merida, Linden 472, 379. — Colombia: Santander: In montibus Quindiuensibus, Bonpland; prope Vetas, 3100—3200 m, ad rivuli ripas, 16. I. 1927, Killip et Smith 17381; Caldas: prope Pinares supra Solento ad rivulum ad silvae marginem, 2700—2900 m, 2.—10. VIII. 1922, Pennell 9345, 9343, 9234; Cundinamarca: ad Bogota prope Chapinero, 8800 ped., X. 1922, Tracey; Bogota, 22. XI. 1852, Holton 478; prope Zyraquira, 2600 m, 20.—24. X. 1917, Pennell 2563; prope Bogota, Idinael 3; in paramo prope Bogota, 1917, Fr. Ariste-Joseph A 61; in pratis ad Rio Teusaca, prope Buenavista, 2900—3000 m, 6. X. 1917, Pennell 2360; in montibus Quindiuensibus, Triana; ad Bogota prope Boqueron, 2850 m, 1925, Schultze 93; Tolima: prope Murillo in agris, 2000—2300 m, 19. XII. 1917, Pennell 3186; El Cauca: ad Popayan, in facie orientale Paramo de Guanacas, 2500—3300 m, Lehmann 4557 (partim).

38. **S. debilis** Epl. l. c. 85, 89, 1935.

Herba gracilis debilis in basi plus minusve prostratis altitudine ad 1,5 m, internodiis glabris; foliorum laminis ovatis 4,5—10 cm longis, 2,5—6,5 cm latis, in apice breviter acuminatis in basi pulchre rotundatis rarius infimis leniter subcordatis, petiolis gracilibus 1,5—7 cm longis elatis, margine serrata, paginis ambobus glabris viridibus; floribus 3—6 in verticillastris bracteis glabris ovato-caudatis 3—5 mm longis caducissimis subtentis, glomerulis demum inter se 1—3 cm distantibus in spicas interruptas laxas graciles 5—30 cm longas minutissime

puberulas vel glabras dispositis, pedicellis 3—6 mm longis elatis; calycibus florentibus glaberrimis membranaceis perlucidis saepe purpureis 7—8 mm longis, in maturitate paulo auctis; corollarum rosearum vel albidarum tubo 15 mm longo, labia superiore 7 mm alta, inferiore 5 mm diametro.

Colombia: Santander: Prope Las Vegas in silvis, 2600 ad 3000 m, 21.—23. XII. 1926, Killip et Smith 16092; prope Las Vegas, in silvis umbrosis ad rivuli ripam, 20.—23. XII. 1926, Killip et Smith 16032; in declivitate occidentale montis San Vincente ad Charta in silvis umbrosis humidis, 2500—2700 m, 9. II. 1927, Killip et Smith 18965.

39. **S. Killipiana** Epl. l. c. 85. 90, 1935.

Herba bella perennis altitudine ad 1 m caulibus laxis diffusis ut videtur decumbentibus superne pubescentibus interdum fere glabris; foliorum laminis deltoideo-cordatis 2—6 cm diametro, in apice nunc obtusis nunc breviter acuminatis, in basi cordatis, petiolis gracilibus 1—5 cm longis elatis, margine crenata pagina superiore nunc glabra nunc molliter villosa, inferiore praesertim ad venas pilis longioribus ornata interdum fere glabra; floribus 6—12 in verticillastris bracteis subrotundis 4—5 mm longis caducis subtentis, glomerulis inter se 0,5—2,5 cm distantibus in spicas interruptas cylindratas 5—15 cm longas approximatis; calycibus florentibus saepius purpureis 7—8,5 mm longis extus ad venas sparse villosulis in maturitate 9—11 mm longis; corollarum rubro-purpurearum tubo 12—14 mm longo sat ampliato, sub labiam inferiorem subconstricto, labia superiore 5—6 mm alta, inferiore 7—8 mm lata.

Venezuela: In Sierra Nevada de Merida, XII. 1923, de Bellard 211. — Colombia: Santander: In silvis prope Chico, 9000 ped., 25. IV. 1881, Kahlbreyer 2017; in facie occidentale Paramo Rico, 3600 m, 15.—19. I. 1927, Killip et Smith 17695; ad marginem Paramo de las Vegas, 3500—3700 m, 20.—21. XII. 1926. Killip et Smith 15604; Cundinamarca: El Palmas ad Bogota, 1844, Goudot; prope Bogota, Bowman; El Boqueron, Bogota, 2700 m, 20. X. 1856, Triana; in Paramo de Choachi prope Bogota, 3700 m, 8. VIII. 1922, Killip et Fr. Ariste-Joseph 11935; Tolima: Mariquita: Quindio, 1400 m, Triana; in silvis ad viam Quindiuensem novam prope La Lora, 14. VIII. 1922, Killip 9779; El Cauca: in paramo de Guanacas, 2500 ad 3300 m, Lehmann 4557 (partim).

Subsect. *Angulatae*.

40. **S. obvallata** Epl. l. c. 85, 72, 1935.

Herba annua erecta altitudine ad 1 m et ultra caulibus superne breviter pubescentibus; foliorum laminis tenuibus 5 ad 10 cm longis, 4—10 cm latis, rotundato-ovatis, breviter acuminatis, in basi rotundatis vel truncato-subcordatis, utrimque praesertim subtus ad venas pilis appressis sparse conspersis, pagina inferiore pallidiore, margine crenato-serrata, petiolis gracilibus 3—6 cm longis elatis; floribus 3—6 mm longis hirtellis subtentis, glomerulis inter se 1—4 cm distantibus, in spicas interruptas elongatas frequenter paniculatas 15—30 cm longas dispositis; calycibus florentibus 6—7 mm longis, extus praesertim ad venas sparse hirtellis, in maturitate 9—10 mm longis, labiis patentibus, superiore rotundata acuminata, inferioris laciniis ovatis acuminatis 2,5 mm longis, pedicellis 4—12 mm longis elatis; corollarum caerulearum tubo 5—6 mm longo sub labiam inferiorem lenissime ventricoso labia superiore 2—2,5 mm alta, inferiore 3,5—5 mm longa.

Colombia: Santander: Inter El Roble et Torra in silvis 1500—1900 m. 17. II. 1927, Killip et Smith 19389; prope California in collibus apertis, 2600 m, 11.—27. I. 1927, Killip et Smith 16874; Norte de Santander: inter Pamplona et La Isla, 2000—2500 m, 27. II. 1927, Killip et Smith 19792.

41. **S. tiliaefolia** Vahl, Symb. Bot. 3, 7, 1794. — *S. fimbriata* Kunth l. c. 2, 299, t. 149, 1817.

Herba annua altitudine ad 1 m et ultra caulibus superne sparse crispule hirtellis; foliorum laminis tenuibus 3—12 cm longis rotundato-ovatis breviter acuminatis in basi rotundatis et maximam partem subtruncatis late cuneatis, utrimque praecipue subtus ad venas et ad margines itaque fimbriatas pilis appressis sparse conspersis crenato-serratis, petiolis gracilibus 2—6 cm longis elatis; floribus 3—12 in verticillastris bracteis caducis subtentis, glomerulis inter se 1—2 cm distantibus, in spicis interruptis elongatis frequenter paniculatis 15—25 cm longis dispositis; calycibus florentibus 4,5—5,5 mm longis, solum ad venas sparse subappresso-hispidulis, in maturitate 5,5—9 mm plerumque 7—7,5 mm longis; corollarum caerulearum tubo 3,5 ad 4 mm longo, labia superiore 1—2 mm alta, inferiore 2—2,5 mm longa; staminum thecis e galea partim exsertis.

Colombia: Caldas: Apia, 1600—1900 m, 4.—5. IX. 1922, Pennell 10280; Popayan, 1700—2200 m, Lehmann 5531, 1400; Rio Chota, 6. VI. 1876, André; Antioquia: prope Caramantha,

1500—2100 m, 19. IX. 1922, Pennell 10792; Caldas: prope Santuario, 1400—1700 m, 13.—14. IX. 1922, Pennell 10604; Caqueza et Guetaou, 31. X. 1878, André 947; Pasto: Ortega, 1500 m, 1850, Triana.

Ecuador: Chimborazo: Huigra, 1200 m, 4.—27. VII. 1923, Hitchcock 20324; Loja, 29. IX.—3. X. 1918, Rose 23261; Ambato, 1918, Pachano 62.

Venezuela: Caracas; Los Venados de Galipan, 27. VIII. 1922, Pittier 10462; prope Caracas, 1829, M. Vargas; prope Caracas, 6. IV., Otto 682.

42. **S. intonsa** Epl. l. c. 85, 74, 1935.

Frutex (?) scandens ramis arcuato-ascendentibus prominule rufo-villosis; foliorum laminis 6,5—13 cm longis, 22—40 mm latis maximam partem rhomboideo-ellipticis, frequenter elliptico-lanceolatis, acutis, margine supra medium recta infra medium saepius leniter concava, in basi ad petiolum obscurum 5—15 mm longum rufo-villosum angustatis, margine crenato-serrata, paginis ambobus hirsuto-villosis viridibus; floribus 3—6 in verticillastris bracteis lanceolato-acuminatis villosis caducis subtentis, glomerulis demum 5—8 mm inter se distantibus in spicas interruptas breves saepe axillares dispositis; calycibus florentibus extus sparse hirtellis 8 mm longis, in maturitate 10—11 mm longis, labia superiore et inferioris laciniis acuminatis subcaudatis 4—4.5 mm longis, pedicellis 2—3 mm longis elatis; corollarum rosearum tubo 7 mm longo valde ventricoso et paulo infra medium invaginato intus nudo, labia superiore 4.5—5 mm alta, inferiore breviore vel subaequilonga.

Colombia: Santander: Prope California, 2800 m, 11.—27. I. 1927, Killip et Smith 16971.

43. **S. laxispicata** Epl. l. c. 85, 69, 1935.

Frutex ramis sparse pubescentibus; foliorum laminis 5—8 cm longis, 2—2.5 cm latis, elliptico-lanceolatis vel anguste ovatis, in apice longe leniterque acuminatis in basi angustatis interdum ad petiolos 1—2 cm longos acuminatis, marginibus serrulatis, paginis ambobus fere glabris sparse pubescentibus; floribus 6—12 in verticillastris bracteis 2—3 mm longis ovato-acuminatis subtentis in spicas interruptas 6—9 cm longas verisimiliter numerosas laterales dispositis, glomerulis inter se 0,5—2 cm distantibus; calycibus florentibus 6—7 mm longis extus pilis mollibus sparse conspersis in maturitate 8—8,5 mm longis labiis hiantibus superiore acuminata, inferioris laciniis sub-

caudatis; corollarum caerulearum tubo 6—7 mm longo supra medium ventricoso, labia superiore 4 mm alta, inferiore paulo longiore.

Venezuela: Sine loco. Moritz 999: inter La Puerta et Timotes, 2000 m. 16. IX. 1922. Jahn 1142.

44. **S. sphacelioides** Benth. in DC., Prodr. 12. 337, 1848. — *S. viridifolia* Rusby, Descrip. New Sp. S. Am. Pl. 110, 1920. — *S. caracasana* Briq. l. c. 2, 147, 1898.

Frutex altitudine ad 2 m ramis glabratis superne tomentoso-villosis; foliorum laminis 5—12 cm longis, 2—6 cm latis, ellipticis vel lanceolatis, in apice leniter acuminatis, in basi saepius ad petiolos 1—2 cm longos pubescentes angustatis, margine serrulata, pagina superiore hirtella, inferiore cinereo-pubescente demum subglabra; floribus 6—12 in verticillastris bracteis lanceolatis acuminatis hirsutis tarde deciduis 8—15 mm longis subtentis, glomerulis inter se 5—10 mm distantibus, in spicas subinterruptas 10—15 cm longas confertis; calycibus florentibus 8—10 mm longis, extus hirtellis, in maturitate 11—12 mm longis, labia superiore rotundato-acuminata, inferioris laciniis paulo longioribus acuminatis caudatis infra medium connatis, pedicellis 3—4 mm longis elatis; corollarum tubo intus nudo, 13—14 mm longo superne leniter ventricoso, labia superiore 3—3.5 mm alta, inferiore subaequilonga.

Venezuela: San Sebastian prope Caracas, 6000 ped., Funck 278.

Colombia: In Sierra Nevada de Santa Marta, Purdie; ad Rio Hacha, Sierra Nevada, 10000 ped., 1852, Schlim 822; prope Vista Nieve. Santa Marta, 16. XII. 1922, Viereck 3; in apricis ad rivuli marginem prope Las Nubes, 4500 ped., 15. XII. 1898, H. H. Smith 1381; prope San Miguel in Sierra Nevada de Santa Marta, Engels.

45. **S. angulata** Benth., Lab. Gen. et Sp. 721, 1835 et in DC., Prodr. 12, 309, 1848. — ? *S. toraricnsis* Briq. l. c. 2. 430. 1898.

Suffrutex ramulis molliter pubescentibus; foliorum laminis 6—12 cm longis, 3—6 cm latis, ovatis, in apice acutis vel breviter acuminatis, in basi ad petiolos 2—4 cm longos extenuatis, margine serrata crenis acutiusculis, pagina superiore sparse hirtella inferiore cinereo-pubescente; floribus 3—6 in verticillastris bracteis ovato-caudatis 5—8 mm longis caducis subtentis, glomerulis inter se 0.5—1,5 cm distantibus in spicas interruptas 5—20 cm longas dispositis; calycibus florentibus 4,5—6 mm longis extus ad venas plus minusve pubescentibus, in maturitate 5,5 ad

6,5 mm longis, labia superiore recurvo-erecta acuminata 2—2,5 mm alta, pedicellis 2—3 mm longis elatis; corollarum pallide caerulearum tubo 5 mm longo ventricoso intus nudo, labia superiore 4 mm alta, inferiore 5—6 mm longa.

Fendler 876 upon which *S. tovariensis* is based is a mixed number. The type in apparently referrable to this species although some specimens of the same number are referrable to *S. longimarginata*. *S. angulata* is very closely allied to *S. longimarginata* from which it differs principally in the pubescence and bracts.

Venezuela: ? Prope Caracas, Fendler 876; prope Caracas, Vargas 74; prope Timotes, Merida, 2000 m, 20. I. 1928, Pittier 12642.

46. **S. longimarginata** Briq. l. c. 2, 127, 1898. — *S. tenuistachya* Rusby, Descr. New Sp. S. Am. Pl. 109, 1920.

Herba perennis vel suffrutex erecta altitudine 1—2 m caulibus fere glabris, superne sparse hirtellis, internodiis 5—10 cm longis; foliorum laminis 6—12 cm longis, late ovatis, in apice acutis vel breviter acuminatis, in basi extenuatis et ad petiolos 3—8 cm longos longe decurrentibus, margine serrata, paginis ambobus fere glabris, inferiore ad venas hirtella: floribus 3—6 in verticillastris bracteis 2—3 mm longis perstatis subtentis, glomerulis inter se 1—2 cm distantibus in spicas interruptas paniculatas 20—30 cm longas dispositis; calycibus florentibus 4,5—5,5 mm longis extus sparse hispidulis in maturitate 6 mm longis: corollarum caerulearum tubo 4—5 mm longo, labia superiore 2,5—3 mm alta.

Venezuela: Prope Ibaa, Yaracuy, 450 m, in silvis, 2. 1. 1929, Pittier 13080; La Victoria, 450 m, 8. IX. 1899, Preuss 1585; prope Caracas, Funck 117; ad La Guayra, Caracas, 7. V. 1874, Kuntze 1266; Quebrada de las Comadres, las Mostages, Miranda, 800 m, XI. 1924, Allart 229; Maya, 1854-5, Fendler 876 (? partim); prope Coloniam Tovar, 4000 ped., 7. IX. 1854, Fendler 876 B; Curucuti, Caracas-La Guaira, 22. VI. 1922, Pittier 10388; prope El Valle, 18. VI. 1891, Eggers 13138; in umbrosis ad cursum inferiorem fluminis.

47. **S. bogotensis** Benth. in DC., Prodr. 12, 312, 1848.

Herba altitudine 40—80 cm caulibus pubescentibus; foliorum laminis 4—9 cm longis 1,5—3,5 cm latis, oblongo-ovatis in apice acutis interdum obtusiusculis, in basi plerumque angustatis etiam ad petiolos 1—2,5 cm longos extenuatis, margine serrulata, pagina superiore cinereo-viride hirtella, inferiore plus minusve pubescente etiam incana ambobus mollibus;

floribus 6—12 in verticillastris bracteis ovato-lanceolatis acuminatis tarde deciduis pubescentibus 5—10 mm longis, glomerulis inter se 0,5—1,5 cm distantibus supremis confertis in spicas interruptas 5—10 cm longas dispositis, pedicellis 2—2,5 mm longis elatis; calycibus florentibus extus pilis extensis brevibus molliter pubescentibus 5,5—6 cm longis in maturitate 6,5—7 mm longis; corollarum caerulearum tubo 5,5 mm longo ventricoso intus nudo, labia superiore 3 mm alta, inferiore 3,5 mm diametro.

Colombia: Cundinamarca: Ad Fute in altaplainitie Bogotensi, 1855, Triana: prope Bogota, Goudot; prope Bogota, 23. XI. 1852, Holton 479; prope Bogota, Mutis 112. 2259. 110, 111; Santander: in valle fluminis Surata inter El Jaboncillo et Surata, in declivitate arida, 1500—1800 m, 3. I. 1927, Killip et Smith 16441.

48. **S. membranicalyx** Epl. l. c. 85, 71, 1935. — *S. membranacea* var. *acuminata* Benth., Lab. Gen. et Sp. 259, 1833 et in DC., Prodr. 12, 310, 1848.

Herba annua altitudine 60—80 cm superne ramosa glabra: foliorum laminis tenue membranaceis 4—6 cm longis. 18—30 mm latis, acuminatis, in basi rotundato-angustatis, subcuneatis, margine serrata, paginis ambobus glabris. petiolis 2—4 cm longis; floribus tribus in verticillastris bracteis lanceolatis 2—3 mm longis deciduis subtentis glomerulis inter se 5—10 mm distantibus in spicas interruptas 8—15 cm longas graciles dispositis; calycibus florentibus vix 5 mm longis extus glabris, in maturitate membranaceis 8—10 mm longis, labia superiore rotundata recurvo-erecta mucronata, inferioris laciniis acuminatis paulo longioribus, pedicellis 3—5 mm longis gracilibus elatis; corollarum tubo subcylindrato 5—6 mm longo superne leniter ventricoso intus nudo, labia superiore 4 mm alta. inferiore 5 mm longa.

Ecuador: Prope Guayaquil, Tafalla. Fraser. Sinclair.

49. **S. ocimifolia** Epl. l. c. 85. 69. 1935.

Herba ut videtur ramis fere glabris; foliorum laminis tenuibus 5—8 cm longis, 2,5—3,5 cm latis, ovatis vel oblongo-ovatis, in apice breviter acuminatis rarius obtusis, in basi rotundato-angustatis, petiolis 1—3 cm longis elatis, margine leniter crenato-serrata interdum subintegra, paginis ambobus glabris; floribus 3—6 in verticillastris bracteis membranaceis ovato-lanceolatis ciliatis 7—10 mm longis deciduis subtentis, glomerulis demum inter se 8—15 mm distantibus in spicas interruptas strictas angustas 15—25 cm longas puberulas dispositis; calycibus florentibus 11 mm

longis, pedicellis 3—4 mm longis elatis, membranaceis perlucidis extus sparse hirtellis, in maturitate paulo auctis, labia superiore rotundato-mucronata, inferioris laciniis acuminatis 3,5 mm longis; corollarum purpurearum tubo 14 mm longo ventricoso intus nudo, labia superiore 4 mm alta, inferiore longiore 8 mm diametro.

Ecuador: Prov. Manabi prope El Recreo. lat. $^1/_2{}^0$ Austr.. Eggers 15053.

Subsect. *Ampelophylla*.

50. **S. ampelophylla** Epl. l. c. 85, 76, 1935.

Suffrutex speciosus altitudine ad 3 m caulibus superne pilis extensis molliter incano-puberulis; foliorum laminis sat tenuibus 8—16 cm longis, 5—12 cm latis, rotundato-cordatis, in apice caudato-acuminatis, margine crenato-serrulata, paginis ambobus mollissimis, petiolis 5—10 cm longis pubescentibus et facie superiore villosis elatis; floribus numerosis in verticillastris bracteis ovato-caudatis 6—10 mm longis caducis subtentis, glomerulis multifloris demum inter se 1—4 cm distantibus, in spicis interruptis speciosis magnis dispositis; calycibus florentibus 10—15 mm longis, extus pilis extensis et glandulosis pubescentibus in maturitate 15—18 mm longis, labia superiore 9—10 mm longa, acuminato-caudata, inferioris similibus ad medium et ultra connatis in caudas 2—3 mm longas extenuatis, pedicellis 1—2,5 cm longis elatis: corollarum caerulearum tubo 15—18 mm longo, ad basim invaginato. ventricoso, sub labiam inferiorem leniter invaginato. labia superiore 5—6 mm alta, inferiore 8—10 mm longa.

Colombia: El Cauca: Prope Coconuco, 2600 m, 4. II. 1884, Lehmann 3508; in pratis prope San Andreas ad Coconuco. 2500—2800 m, 14.—18. VI. 1922, Pennell 7159; in valle de Quintero supra Pitayo, in valle Rio Palo, 2700 m, 4. II. 1906, Pittier 1426; in silvis in faciebus occidentalibus Paramo de Guanacas, 2500—2800 m, Lehmann 4704.

51. **S. amethystina** J. E. Smith, Ic. Ined. 2, 27, t. 27, 1790. — *S. venusta* Kunth l. c. 2, 301, t. 153, 1817.

Herba perennis altitudine ad 1,5 m ramis pubescentibus et maximam partem pilis longioribus pilosis verisimiliter viscidis; foliorum laminis 5—12 cm longis, 4—7 cm latis, cordatis, in apice acuminatis, margine crenato-serrata, pagina superiore molliter hirsuta griseo-viride, inferiore cinereo-villosa subtomentosa, petiolis 5—15 mm longis pubescentibus et saepius pilosis elatis; floribus circiter 6 in verticillastris bracteis ovatis caducis 5—12 mm

longis pilosis caeruleis subtentis, glomerulis demum inter se 2—5 cm distantibus in spicas interruptas speciosas pilosas dispositis; calycibus florentibus purpureis 12—14 mm longis extus plus minusve pubescentibus et praesertim ad venas pilosis in maturitate 12 ad 18 mm longis, labiis hiantibus superiore 5—7 mm longa rotundata mucronata, inferioris laciniis paulo longioribus leniter acuminatis infra medium connatis, pedicellis 1—1.5 cm longis pilosis elatis; corollarum caerulearum tubo crasso ad basim invaginato ventricoso 17—21 mm longo, labia superiore 6—8 mm alta, inferiore 8—12 mm longa.

Colombia: Cundinamarca: Prope Guadaloupe, 3000 m, XI. 1913, Fr. Apollinaire-Arthur 25, 91; Sabana de Bogota, V. 1923, Pring 108; in collibus Chapinero, Sabana de Bogota, VI. 1923, Pring 184; prope Bogota, 1918, Fr. Ariste-Joseph 861; El Dintel, I. 1920, Fr. Ariste-Joseph 524; prope Sibate, 2700—2800 m, 13.—15. X. 1917, Pennell 2427; ad Boqueron de Bogota, 2800 m, 21. X. 1875, André 760; in silvis prope Chico, 9000—9500 ped., 25. IV. 1861, Kahlbreyer 2013; prope Bogota, Tracey 78; prope Bogota, Goudot; in viam ad Fusagasuga, 2700 m, 1853, Triana; in andibus Quindio inter Quebrada de Foche et La Seja, Humboldt et Bonpland; Santander: in declivitate occidentale Paramo Rico, 3600 m, 15.—19. I. 1927, Killip et Smith 17702.

Subsect. *Briquetia*.

52. **S. ecuadorensis** Briq. l. c. 2, 162, 1898.

Suffrutex altitudine ad 2 m valde ramosus ramis glabris; foliorum laminis 5—10 cm longis, 3,5—7 cm latis, late ovatis etiam rotundato-ovatis, breviter acuminatis, in basi rotundatis, petiolis 2—10 cm longis elatis, margine serrata, paginis ambobus glaberrimis, inferiore saepe purpurea; floribus 3—6 in verticillastris bracteis glabris ovato-caudatis 5—8 mm longis caducis subtentis, glomerulis demum inter se 1—2 cm distantibus in spicas interruptas 20—30 cm longas dispositis; calycibus florentibus extus glabris, intus hispidulis, 1 cm longis, in maturitate 12 mm longis, labia superiore truncato-rotundata etiam retusa breviter caudata, inferioris laciniis caudatis, 5 mm longis, sub caudas connatis, pedicellis 3—4 mm longis elatis; corollarum violacearum tubo 15 mm longo ventricoso intus nudo, labia superiore 10 mm alta, inferiore.

Ecuador: In silvis prope Pallatunga, X. 1858, Spruce 5543.

Subsect. *Erythrostachys.*

53. **S. libanensis** Rusby, Descr. New Sp. S. Am. Pl. 111, 1920.

Frutex speciosus altitudine ad 3 m ramis dense rufo-villosis; foliorum laminis late ovatis 10—18 cm longis, 6—12 cm latis, in apice acuminatis, in basi rotundatis, margine serrata, pagini ambobus hirsutis, petiolis 4—7 cm longis elatis; floribus 6 in verticillastris bracteis rotundato-acuminatis deciduis 15—25 mm longis subtentis, in spicis interruptis speciosis dispositis, glomerulis demum inter se 1,5—2,5 cm distantibus; calycibus florentibus campanulatis summe coccineis interdum viridibus 20 mm longis extus sparse rubro-villosis membranaceis reticulato-venulosis, in maturitate 25—26 mm longis, pedicellis 15—20 mm longis elatis; corollarum tubo 38 mm longo crasso leniter ventricoso, sub labiam inferiorem constricto intus nudo, labia superiore 20—22 mm alta, inferiore subaequilonga.

Colombia: Magdalena: In Sierra del Libano, 2000 m, III. 1899, H. H. Smith 1380; in Sierra San Lorenzo prope Santa Marta, 2200 m, 15. XII. 1922, Viereck.

Subsect. *Leucocephalae.*

54. **S. leucocephala** Kunth l. c. 2, 302, t. 156, 1817.

Frutex speciosus elegans altitudine ad 5 m ramulis pilis floccoso-ramosis dense albo-tomentosis, mox glabris; foliorum laminis 3—9 cm longis, 2,5—6 cm latis, late ovatis, in apice nunc obtusis nunc acutiusculis, in basi nunc cordatis nunc rotundatis, petiolis 0,5—1 cm longis elatis, pagina superiore viride hirtella, inferiore pilis ramosis nunc dense albo-tomentosa vel albo-lanata nunc fere glabra, margine crenato-serrata; floribus 6—12 in verticillastris bracteis orbiculatis breviter acuminatis tomentosis 6—12 mm diametro deciduis subtentis, glomerulis in spicas speciosas 5—20 cm longas confertis; calycibus florentibus pilis floccoso-ramosis extus albo-tomentosis 12—20 mm longis, in maturitate 15—30 mm longis, labiis obtusis, superiore 4—4,5 mm longa, inferiore dimidia parte breviore; corollarum rubro-purpurearum tubo 20—28 mm longo sat crasso subcylindrato intus nudo sub labiam inferiorem constricto, labia superiore 12—15 mm alta, inferiore paulo breviore.

Ecuador: In silvis Pangor, XI. 1858, Spruce; in andibus prope Alausi, Bonpland 3239; in declivibus siccis prope Alausi et Huataxi, 9000 ped., IX. 1839, Spruce 6054; in andibus Quitensibus, Jameson; ad Hacienda de Licay prope Huigra, 5000 ad 5500 ped., 21. VIII. 1918, Rose 22278; prope Huigra, 4. VIII. 1920, Holway 839, 835; prope Alausi, 2500 m, 19.—27. VII. 1923, Hitchcock 20694.

Subsect. *Longiflorae.*

55. **S. vestita** Benth. in DC., Prodr. **12**, 346, 1848.

Frutex ut videtur ramis pilis 2—3 mm longis in siccis ferrugineis dense hirsuto-villosis: foliorum laminis 5—7 cm longis, 4,5—6 cm latis, cordatis, subacutis, margine serrato-crenata, paginis ambobus dense hirsuto-villosis, petiolis 2—4 cm longis, elatis; floribus tribus in verticillastris bracteis rotundatis 15—20 mm diametro breviter acuminatis dense hirsuto-villosis (? omnino) perstatis subtentis, glomerulis demum inter se 1,5 ad 3 cm distantibus; calycibus florentibus 16—17 mm longis, extus hirsuto-villosis, labia superiore rotundata mucronata, inferioris laciniis breviter acuminatis infra medium connatis, in maturitate non visis; corollarum tubo 50—52 mm longo cylindrato intus nudo, labia superiore 15 mm alta, inferiore subaequilonga.

(?) Colombia (Peruvia): Sine loco, Lobb.

Subsect. *Killipiana.*

56. **S. erythrostoma** Epl. l. c. 85, 101, 1936.

Suffrutex altitudine ad 6 m caulibus superne minutissime et dense puberulis velutinis: foliorum laminis 8—12 cm longis rotundato-cordatis, in apice abrupte [illegible] breviter acuminatis, margine crenato-serrata, paginis amb[illegible]obus sparse hirtellis inferiore [illegible]itate occidenlis perlucidis [illegible] pallidiore glandul[illegible] [illegible]nitidis conspersa, petiolis 6—10 cm longis elatis; floribus circiter 6 in verticillastris bracteis coccineis rotundatis 3—4 mm diametro caducis subtentis, glomerulis inter se 1—3 cm distantibus in spicas interruptas diffusas pilis extensis brevioribus et longioribus glandulosis incanas dispositis, pedicellis demum 8—12 mm longis elatis; calycibus florentibus non visis submaturis 8 mm longis extus pilis extensis minutissimis et longioribus ad 2 mm longis capitato-glandulosis vestitis, labiis coccineis superiore 3-venis mucronata, inferiore paulo longiore laciniis acuminatis; corollis verisimiliter parvis et nuculis non visis.

Colombia: Santander: Prope Surata, 1600—1800 m, 4.—10. I. 1927, Killip et Smith 16772.

57. **S. latens** Benth., Pl. Hartweg. 242, 1846.

Frutex diffusus altitudine ad 2 m et ultra interdum ad 6 m subscandens ramis praecipue ad nodis et superne rufo-villosis; foliorum laminis 6—12 cm longis, 3—5 cm latis, coriaceis, rugosis, nunc oblongo- nunc ovato-ellipticis, utrimque angustatis, in apice acuminatis, in basi nunc acutis nunc acuminatis, margine serrata, pagina superiore ad venas hirtella, inferiore nunc praesertim ad venas villosula nunc glabra, junioribus patentim rufo-villosis

omnibus petiolis villosis 1—3 cm longis elatis; floribus 3—6 in foliorum supremorum axillis dispositis; calycibus florentibus extus sparse villosulis 11—12 mm longis, in maturitate 12 ad 14 mm longis, labia superiore 3-venis et inferioris laciniis acuminatis subcaudatis 4—5 mm longis, pedicellis 4—5 mm longis villosis elatis; corollarum tubo 17—19 mm longo, labia superiore 8—9 mm alta, inferiore subaequilonga.

Colombia: El Cauca: Calaguala prope Coconuco ad rivulum ad Rio San Andreas, 2500—2800 m. 18. VI. 1922, Pennell 7158: in silvis Hato Frio prope El Salado, Hartweg 1326; prope Timbio. Popayan, Triana; prope Popayan, 18. VI. 1881, Lehmann 826: Antioquia: sine loco, Jervise; prope Santa Elena, 1. I. 1931, Archer 1282; prope La Sierra, Medellin, 2000 m, 29. I. 1931, Archer 1514.

58. **S. laurifolia** Epl. l. c. 85, 102, 1936.

Frutex altitudine ad 2 m et ultra ramis plus minusve rufopubescentibus interdum glabratis; foliorum laminis 6—12 cm longis, 2—6 cm latis, ovato-ellipticis, in apice longe leniterque acuminatis, in basi ad petiolos 1—2 cm longos angustatis, margine serrulata, paginis ambobus fere glabris interdum sparse pubescentibus; floribus 2—6 in verticillastris bracteis glabratis ovato-caudatis 6—12 mm longis caducis subtentis, glomerulis inter se 5—15 mm distantibus in spicas interruptas glabratas 0—25 cm longas saepe axillares dispositis; calycibus florentibus 9—13 mm longis extus glabratis purpureis ad venas interdum hispidulis vel sparse hirtellis, in maturitate paulo auctis labiis ambobus acuminatis, superiore 3-venis interdum sub-5-venis, pedicellis 3—5 mm longis elatis; corollarum tubo 15—18 mm longo, labia superiore 9—13 mm alta, inferiore 7—9 mm longa.

An *S. latentis* varietas?

Colombia: Caldas: Inter Salento et Laguneta in silvis 2400—2700 m, 1. VIII. 1922, Killip et Hazen 9127, 9130; ad Pinares supra Salento in silvis, 2600—2900 m, 2.—10. VIII. 1922, Pennell 9206: Cundinamarca; ad cataractam Tequendama, 11. XII. 1852, Holton 480: inter Baquia et Volcanito, 25. XI. 1853, Holton 483; prope Bogota, 8000 ped., I. 1916, Tracey 129: inter Pasca et Sumapaz, 8000 ped., 1. 1922, Tracey 351; inter Bogota et Honda, 15. V. 1881, Kahlbreyer 2032; inter El Charquita et Tequendama, 18. XII. 1926, Niemeyer 87; Huila: in silvis cord. orient. prope Neiva, 1800—2300 m, 1.—8 VIII. 1917, Rusby et Pennell 886; Antioquia: La Sierra, Medellin, 2000 m, 19. I. 1931, Archer 1514.

59. **S. costata** Epl. l. c. 85, 102, 1936.

Suffrutex ramis gracilibus fere glabris; foliorum laminis maximam partem 6—7 cm longis, 2,5—3,5 cm latis, ovato-ellipticis, leniter acuminatis, in basi ad petiolos 1—1,5 cm longos angustatis, margine serrulata, paginis ambobus fere glabris, venis prominulis reticulatis; floribus 1—3 in verticillastris bracteis non visis subtentis, glomerulis inter se 0.5—12 mm distantibus in spicas interruptas breves 2—8 cm longas in foliorum supremorum axillis dispositis; calycibus florentibus 12 mm longis, extus ad venas incrassatas costatas purpureas hispidulo-muriculatis caeterum glabris, labia superiore 3-venis, pedicellis 3 ad 4 mm longis elatis, in maturitate non visis; corollarum tubo 19 mm longo, labia superiore 14—15 mm alta, inferiore 12—13 mm longa.

An *S. laurifoliae* varietas?

Colombia: Sierra Nevada de Santa Marta ad Rio Hacha, 9000 ped., III. 1852, Schlim 792.

Subsect. *Tubiflorae*.

60. **S. secundiflora** Rusby l. c. 111, 1920.

Frutex altitudine 1—3 m ramis pilis appressis hirtellis glabratis; foliorum laminis late ovatis etiam subrotundis 8—12 cm longis, 6—8 cm latis, in apice acuminatis in basi rotundatis interdum rotundato-angustatis, margine serrulata convexiore, paginis ambobus viridibus fere glabris petiolis 2—4 cm longis elatis; floribus 6—12 in verticillastris bracteis canescentibus lanceolato-caudatis 2—3 mm longis subtentis, glomerulis inter se 2—12 mm distantibus in spicas sat densas 5—10 cm longas subsecundas confertis, pedicellis gracilibus 2—5 mm longis elatis; calycibus florentibus extus brevissime appresso-hirtellis 7 mm longis, in maturitate 8—9 mm longis, labiis ambobus assurgentibus, superiore acuminata 2,5 mm longa 5—7-venis, inferioris laciniis subcaudatis 4—4,5 mm longis, infra medium connatis; corollarum coccinearum tubo 12 mm longo sub labiam inferiorem constricto-ventricoso intus nudo, labia superiore 3 ad 3,5 mm alta, inferiore subaequilonga.

Colombia: Magdalena: In Sierra Nevada de Santa Marta. prope Bonda, 100 ped., 22. X. 1898, H. H. Smith 567; idem, XI. 1898, H. H. Smith 567; prope Onaca, 2500 ped., 20. XII. 1898, H. H. Smith 279: prope Campo Alegre in dumetis et in declivitatibus apricis, 1500 ped., 22. IX. 1898, H. H. Smith 379.

61. **S. camaraefolia** Benth. in DC., Prodr. 12, 342, 1848. — *S. leucocalyx* Briq. l. c. 2, 165, 1898.

Frutex ut videtur ramis gracilibus breviter pubescentibus; foliorum laminis 5—8 cm longis 2.5—4,5 cm latis ovatis rarius ovato-lanceolatis, in apice acuminatis, in basi rotundato-angustatis, petiolis 8—12 mm longis elatis, margine crenato-serrulata, pagina superiore hirtella, inferiore molliter pubescente; floribus 3—6 in verticillastris bracteis deciduis ovatis acuminatis hirtellis 5—15 mm longis subtentis, glomerulis demum inter se 0,5—2 cm distantibus in spicas interruptas subsecundas 5—25 cm longas dispositis; calycibus florentibus extus appresso-hirtellis incanis 9 mm longis, in maturitate paulo auctis, labiis ambobus assurgentibus 3 mm longis acuminatis superiore 3-venis, pedicellis 4—5 mm longis elatis; corollarum tubo 18—19 mm longo sub labiam inferiorem ventricoso intus nudo, labia superiore 6 mm alta inferiore subaequilonga.

Colombia: Magdalena: In Sierra Nevada de Santa Marta, XI. 1844, Purdie; Norte de Santander: prope Ocana, 3500 ped., Schlim 187; prope Ocana, 4000 ped., Schlim 1108.

62. **S. venulosa** Epl. l. c. 85, 105, 1936.

Herba perennis altitudine 40—50 cm ramis praesertim ad angulos hirsutis; foliorum laminis 6—9 cm longis 3—3,5 cm latis, ovatis, breviter acuminatis, in basi ad petiolos 5—10 mm longos cuneato-extenuatis, margine serrata, paginis ambobus fere glabris superiore hirtella, inferiore ad venas hirtella, venulis reticulato-prominulis violaceis; floribus 1—3 in verticillastris bracteis ovatis 2—3 mm longis caducis subtentis glomerulis demum inter se 1—2 cm distantibus in spicas interruptas 8—10 cm longas glanduloso-pubescentes dispositis; calycibus florentibus extus sparse glanduloso-pubescentibus violaceis 8—9 mm longis, labiis vix 1,5 mm longis, superiore sub-5-venis et inferioris laciniis acutis: corollarum tubo 18 mm longo intus nudo sub labiam inferiorem leniter ventricoso, labia superiore 6 mm alta, inferiore 7 mm longo.

Colombia: Caldas: Prope Bélen in declivitate humida aprica 1500—1700 m, 15. IX. 1922, Pennell 10616.

63. **S. pseudolantana** Epl. l. c. 85, 104, 1936.

Frutex ramis arcuato-ascendentibus praecipue ad sulcas villosis demum glabris; foliorum laminis coriaceis 6—10 cm longis, 3—5 cm latis, ovato-ellipticis, breviter acuminatis, in basi rotundatis vel rotundato-angustatis, margine infra medium convexa nec ad basim concava, serrata, pagina superiore nunc sparse nunc dense hirsuta-rugosula, inferiore maximam partem fere glabra ad venas hirtella, frequenter tamen praesertim ad venas sparse villosa,

venis elevatis, transversis prominulis, petiolis 0,5—1,5 cm longis saepius villosis elatis; floribus circiter 6 in verticillastris bracteis caducis non visis subtentis, glomerulis demum inter se 1—2 cm distantibus, in spicas interruptas villosas 10—20 cm longas sat angustas approximatis; calycibus florentibus extus pilis crassiusculis 1—1,5 mm longis villosis 10 mm longis, in maturitate vix auctis, labia superiore 3-venis acuminato-caudata, inferioris laciniis acuminatis, infra medium connatis, pedicellis villosis 4—5 mm longis elatis; corollarum tubo 17 mm longo leniter ventricoso intus nudo, labia superiore 10—11 mm alta, inferiore paulo breviore.

Colombia: Huila: In silvis prope Neiva in Cord. Orient., 1800—2300 m, 1.—8. VIII. 1917, Rusby et Pennell 574, 570; in Quebrada prope Neiva in Cord. Orient., 700—1500 m, 31. VII. 1917, Rusby et Pennell 519; prope Paridi, 1200 m, 7. II. 1876, André 1791.

64. **S. tortuosa** Kunth l. c. 2. 222, t. 142, 1817.

Frutex altitudine ad 3 m ramulis arcuato-ascendentibus pubescentibus mox glabratis; foliorum laminis 4,5—12 cm longis, 3—5,5 cm latis, nunc ovatis nunc ovato-lanceolatis, in apice acutis vel leniter acuminatis, in basi rotundatis, petiolis 1—2 cm longis elatis, margine serrulata, pagina superiore hirtella, inferiore tomentosa, ambobus mollibus; floribus 3—6 in verticillastris bracteis ovato-acuminatis glabratis 5—10 mm longis deciduis subtentis, glomerulis demum inter se 1—2 cm distantibus, in spicas interruptas densas 10—15 cm longas confertis; calycibus florentibus extus mollissime et dense lanatis, interdum fere glabris, 10—17 mm longis, in maturitate paulo auctis labiis abrupte acuminato-caudatis, superiore sub-5-venis, pedicellis 3—5 mm longis elatis: corollarum tubo 19—26 mm longo superne gradatim ampliato intus nudo, labia superiore erecta 12—16 mm alta, inferiore 8 ad 9 mm longa.

Ecuador: In regione temperata montis Pichincha, 26. I. 1920, Holmgren 253; sine loco, Bonpland; prope Quito, Hall; prope Quito, Hartweg 1329; prope Quito, Jameson 227; prope Quito, 21. VIII. 1920, Holway 930; in valle Chillo prope Santa Rosa, 9600 ped., 26. VIII.—2. IX. 1923, Anthony et Tate 213; prope Quito, Jameson 685.

var. **detonsa** Epl. l. c. 85, 936. — Calycibus detonsis interdum minoribus.

Ecuador: Ad Tambillo, 10. XI. 1855, Couthouy; in silvis supra Banos, Tungurahua, 1800—2500 m, Lehmann 5827; prope

Banos, V. 1858, Spruce 5434; prope Quito, 14. VIII. 1920, Holway 889; in monte Tungurahua, 1800—3000 m, 20. XI. 1880, Lehmann 187; inter Otavalo et Malchingui, 2400—3000 m, 12. VIII. 1923, Hitchcock 20826; prope Banos, IV. 1919, Pachano 224; prope Quito, Orton: prope pagum Guapulo, 2700 m, 5. XI. 1927, Firmin 243.

65. **S. moschata** Kunth l. c. 2. 293. t. 143, 1817.

Frutex altitudine ad 4 m ramis superne rufo-villosis mox glabris; foliorum laminis 6—14 cm longis, 2,5—6,5 cm latis, ovatis, in apice breviter acuminatis, in basi rotundatis et ad petiolos 0,5—3 cm longos abrupte cuneato-decurrentibus, margine serrata, paginis ambobus vel omnino glabris vel pilis brevibus flavidis (siccis) sparse conspersis: floribus 1—3 in verticillastris bracteis 6—12 mm longis ovatis acuminatis subglabris purpureis caducis subtentis, glomerulis demum inter se 3—12 mm in spicas interruptas 5—15 cm longas confertis; calycibus florentibus extus flavido-hirtellis fere glabris, 10—14 mm longis, in maturitate paulo auctis, labiis 4—6 mm longis ambobus acuminatis, inferioris laciniis saepe omnino connatis, pedicellis 3—5 mm longis elatis; corollarum tubo 20—26 mm longo, intus nudo, superne gradatim ampliato sub labiam inferiorem constricto subventricoso, labia superiore 10—14 mm alta, inferiore breviore.

Colombia: El Cauca: Juxta urbem Almaguer, Bonpland 2084; prope La Gallera in valle Micay ad Rio San Joaquin in aprico, 1100—1300 m, 29.—30. VI. 1922, Killip 7829: inter El Ramal et Rio Sucio ad Popayan, 2000—2200 m, 3. VII. 1922, Pennell et Killip 8096; prope Popayan, Triana; Alto San Antonio prope Tocata in valle Rio Dagua, 2. IV. 1876, André 2619; prope Timbio ad Popayan, 1500 m, Triana; prope Tacueyo in valle Rio Pala, cord. Centr., 1800 m, I. 1906, Pittier 1052; infra Jumbolo in valle Rio Pala, 2100 m, 5. II. 1906, Pittier 1448; prope Popayan, 1700—2000 m, Lehmann 5503.

Subsect. *Purpureae.*

66. **S. sordida** Benth., Pl. Hartweg. 241, 1846 et in DC., Prodr. **12**, 321, 1848. — ? *S. anaglypha* Briq. l. c. 2, 246, 1898.

Frutex altitudine ad 2 m ramis dense molliterque tomentosis; foliorum laminis 4,5—8,5 cm longis, 2—5 cm latis, ovatis, acutiusculis in basi rotundatis, margine crenato-serrata, pagina superiore plus minusve bullato-rugosa, hirtella, inferiore dense molliterque tomentosa incana, petiolis 0,5—2,5 cm longis dense tomentosis elatis; floribus 3—6 in verticillastris densis bracteis 6—8 mm longis dense lanatis ovatis caducis subtentis, glomerulis inter se

5—8 mm distantibus, in spicas 5—8 cm longas confertis; calycibus florentibus extus lanatis incanis vel purpureis 7—8 mm longis, labiis 2,5 mm longis, superiore saepius 3-venis et inferioris laciniis acuminatis, in maturitate paulo auctis; corollarum (?) purpurearum tubo 12 mm longo, labia superiore 4 mm alta, inferiore subaequilonga.

S. anaglyphae specimina manca a *S. sordida* nisi foliis tenuioribus et floribus paulo minoribus vix differunt.

Colombia: Cundinamarca: Prope Bogota, Goudot 59; prope Chiquinquira ad Bogota, Engels; inter Bogota et vicum Zipaguira, Hartweg 1324; Norte de Santander: in paramos prope Ocana, 8000—10000 ped., Schlim 1107, 560.

67. **S. rufula** Kunth l. c. 2, 291, 1917. — *S. rufida* Willd. ex Schultes, Mant. 1, 189, 1822 (nomen). — *S. Goudotii* Benth. in DC., Prodr. 12, 339, 1848. — *S. orophila* Briq. in Beih. Bot. Ctrbl. 13, 81, tab. 3, f. 1—3, 1902.

Herba verisimiliter suffruticosa ramulis superne tomentosis: foliorum laminis 5—8 cm longis, 2,5—3,5 cm latis, anguste ovatis, in apice acuminatis, in basi rotundato-angustatis, petiolis 5—12 mm longis elatis, margine crenato-serrulata, pagina superiore sparse hirsuta inferiore molliter pubescente subtomentosa; floribus 3—6 in verticillastris bracteis ovato-caudatis hirtellis 5—8 mm longis deciduis subtentis, glomerulis demum inter se 1—1.5 cm distantibus in spicas interruptas 5—15 cm longas dispositis: calycibus florentibus extus sparse hirtellis subglabris et glandulis sessilibus conspersis 7,5—8 mm longis, in maturitate paulo auctis, pedicellis 3—4 mm longis elatis; corollarum tubo circiter 16 mm longo, labia superiore 10 mm alta, inferiore 7—8 mm diametro.

Colombia: Tolima: Ad Toche, 25. I. 1853, Holton; inter Gallegos et Toche in silvis, 2000—2700 m, 2. VIII. 1922, Killip et Hazen 9553; inter San Miguel et La Lora in silvis, 7. VIII. 1922, Hazen 9676; prope Gallegos, Bonpland; in Quebrada de los Corales in montibus Quindio, Goudot; prope Ibague, Goudot; prope Las Maquinas in cord. occ., 6900 ped., 19.—24. IX. 1923, Anthony et Tate 260; Sequentes nisi floribus paulo minoribus vix differunt; Rio Paez, 1000—1800 m, Lehmann 5825; prope Inza, 1200—2000 m, 12. XI. 1882, Lehmann 2258: Huila: prope Guadalupe, 6. VIII. 1926, Juzepczuk 5727.

68. **S. tolimensis** Kunth l. c. 2, 292, 1817.

Frutex ramulis villoso-tomentosis; foliorum laminis coriaceis 5—10 cm longis, 2—5,5 cm latis, maximam partem ovatis, in apice

acutis vel acuminatis, in basi rotundatis interdum rotundato-angustatis, margine crenato-serrata, pagina superiore hirtella subglabra bullato-rugosa, inferiore dense tomentosa venis reticulato-prominulis, petiolis 0,5—1,5 cm longis elatis; floribus 3—12 in verticillastris densis bracteis ovatis 4—8 mm longis dense tomentosis caducis subtentis, glomerulis demum inter se 1—3 cm distantibus in spicas interruptas tomentosas dispositis; calycibus florentibus extus 9—10 mm longis extus lanatis verisimiliter purpureis in maturitate paulo auctis labiis ambobus acuminatis: corollarum tubo 15—16 mm longo, labia superiore 9—11 mm alta, inferiore breviore 7 mm diametro.

Colombia: Tolima: Prope Mariquita, 1843, Linden 1098; prope Mariquita, 1853, Triana; in summo montis Quindio, 8000 ped., Purdie; inter Ibague et Tolima, Bonpland; prope Volcancito, 26. I. 1853, Holton: in paramo del Quindio, 3300 m, III. 1876, André 2190.

Majorana (Tourn.) Rupp.

1. **M. hortensis** Moench., Meth. 406, 1794.

Colombia.

Satureja.

Satureja L., Gen. Pl., ed. V. 247, 1754 et in Sp. Pl. 567, 1753

Herbae perennes suffrutices vel frutices habitu diversi; foliis sat parvis densis; floribus in foliorum axillis nunc solitatim nunc in cymulis vel diffusis vel densis dispositis interdum (*S. stachyodes*) spicas formantibus; calycum tubo plerumque cylindrato interdum campanulato, 13—15-venis, dentibus maximam partem bilabiatis tribus superioribus in basi plus minusve connatis, duobus inferioribus liberis, faucibus vel glabris vel hirsutis; corollarum tubo gradatim ampliato, saepe leniter arcuato; labia superiore erecta emarginata, inferiore subaequilonga patente; staminibus quatuor supra tubi medium positis didymis posticis paulo brevioribus, filamentis glabris, connectivo deltoideo-incrassato thecis divaricatis; stylo exserto inaequaliter bifido: nuculis oblongis vel ovatis sectionis Xenopomata frequenter in mucronem productis.

Frutices rarius fruticuli nullomodo prostrati;
 flores interdum solitarii saepius in cymulis
 axillaribus dispositi
 Calycum tubi 2—2,5 mm longi
 Corollarum tubi 4—4,5 mm longi . . . . . *S. mutabilis*
 Corollarum tubi 6—14 mm longi

Folia maximam partem lineari-oblonga interdum anguste deltoidea marginibus ad venam mediam revolutis; flores saepius in spicas congesti . . . . *S. stachyodes*

Folia maximam partem ovato-elliptica, marginibus subplanis vel anguste revolutis; flores in foliorum axillis sat remotis dispositi . . . . *S. discolor*

Calycum tubi 3—7 mm longi

Folia valde replicata et infra venam mediam conniventa paginam inferiorem itaque toto adumbranta; paginae superioris facies superior pubescens inferior glaberrima; corollarum tubi 8 mm longi . . . . *S. caerulescens*

Folia vel plana vel marginibus anguste revolutis nec paginam inferiorem adumbrantibus

Folia 2—3 mm longa . . . . *S. Jamesoni*

Folia 6—22 mm longa

Folia lineari-lanceolata 1—3 mm lata . *S. taxifolia*

Folia elliptica vel ovata interdum rotunda, 3—15 mm lata

Folia utrimque glabra pagina superiore subnitida

Calycum dentes deltoidei 1—1,2 mm longi: folia maximam partem 10 ad 12 mm longa . . . . *S. glabrata*

Calycum dentes subulati acutissimi; folia maximam partem 6—9 mm longa . . . . *S. lineata*

Folia nunc minutissime puberula nunc sericeo-hirtella interdum praesertim subtus tomentosa

Calycum tubi 7 mm longi; folia utrimque pilis brevibus appressis subsericea . *S. cercocarpoides*

Calycum tubi 4.5—5 mm longi; folia vel minutissime puberula vel tomentosa

Folia elliptica vel elliptico-obovata minutissime puberula . . . . . . *S. Loeseneriana*

Folia rotundo-ovata vel rotunda rarius elliptico-obovata pagina superiore hirtella vel subglabra, inferiore saepius tomentosa interdum ad venas villosa . . . . *S. tomentosa*

Herbae prostratae tenellae floribus in axillis solitariis
Caules glabri; petioli magnam partem 5 ad 8 mm longi . . . . *S. Brownei*
Caules hirtelli; petioli magnam partem 1 ad 3 mm longi
Folia rotundato-reniforma glabra; calycum tubi 1.5—1.8 mm longi . . . . *S. tenella*
Folia ovata: calycum tubi 2—2.5 mm longi *S. nubigena*

1. **S. discolor** (Kunth) Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV, 3a, 300, 1897. — *Gardoquia discolor* Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. Pl. 2, 312, 1817. — *G. foliolosa* Benth. in DC., Prodr. 12, 238, 1848. *Satureja foliolosa* Briq., l. c.

Frutex dense foliolosus gracilis altitudine ad 1.5 m ramulis praesertim juvencum villosis etiam lanatis interdum fere glabris, internodiis 2—8 mm longis: foliorum laminis 3—18 mm longis maximam partem ovato-ellipticis, in apice obtusiusculis, in basi ad petiolos subnullos angustatis, margine integra anguste revoluta, pagina superiore pilis minutissimis irrasa fere glabra atroviride, inferiore pilis minutissimis incana et longioribus praesertim ad venas plus minusve ornata; floribus 3—9 in foliorum axillis congestis interdum solitariis, pedicellis 2 mm longis elatis; calycum tubo 2—2,5 mm longo extus pilis longioribus villoso, labiae superioris 2—2,5 mm longae dentibus deltoideis, 0,8 ad 1,2 mm longis obtusiusculis, inferioris dentibus deltoideo-lanceolatis acutis 2—2,5 mm longis; corollarum rosearum tubo 11 ad 14 mm longo, labia superiore 2,5—3 mm alta, inferiore subaequilonga: staminibus supra tubi medium positis, breviter exsertis; nuculis non visis.

Venezuela: In Silla de Caracas, Bonpland: in Silla de Caracas, 1842, Linden 120: in Silla de Caracas 1843, Funck 476; in Silla de Caracas, 20. I. 1856, Gallmer; prope Colonia Tovar, Fendler 2058; in Silla de Caracas, 2600 m, 27. IV. 1884, Jahn 288; in Silla de Caracas, 2000—2640 m, 26.—29. XII. 1918, Pittier 8360; in Silla de Caracas, 8000 ped., 21. V. 1874, Kuntze.

Colombia: Norte de Santander: Prope Ocana in paramos, 2600—3300 m. Schlim 380; Norte de Santander; inter Pamplona et Toledo, in montis jugo inter Rio La Teja et Rio Mesme, 2500 ad 2800 m, in dumetis ad ripas, 28. II. 1927, Killip et Smith 19885; Santander: in declivitate occidentale, Paramo Rico, 3300—3600 m. in silvis 15.—19. I. 1927, Killip et Smith 17778, 21170; Magdalena: in Sierra Nevada de Sta. Marta, 4300 m, Purdie.

2. **S. tomentosa** (Kunth) Briq. l. c., ed. 1, IV, 3a, 300, 1897. — *Gardoquia tomentosa* Kunth l. c. 2, 314, 1817. — *G. thymoides, elegans* et *grandiflora* Kunth l. c. 2, 314, 315, 1817. — *G. incana* et *quitensis* Willd. ex Benth. in Linnaea 11, 331, 1837 (nomina). — *Satureja elegans, Kunthii* et *thymoides* Briq. l. c. — *S. Kunthii* var. *crenata, parvifolia* et *subintegrifolia* Briq. in Ann. Conserv. et Jard. Bot. Genève 2, 189, 1898.

Frutex ramosus altitudine ad 1,5 m ramulis superne vel puberulis vel tomentosis incanis; foliorum laminis magnitudine formaque variis maximam partem rotundis vel rotundato-obovatis interdum elliptico-obovatis, 1—1,5 cm longis, in apice obtusis vel rotundatis, in basi ad petiolos 1—2 mm longos angustatis, margine subcrenata, pagina superiore rugosa, venis impressis, nunc sparse hirtella nunc glabra, inferiore vel albo-tomentosa vel ad venas villosa; floribus plerumque 3—6 in foliorum axillis pedicellis 1—1,5 mm longis elatis; calycum tubo extus molliter pubescente 4,5—5 mm longo, labiae superioris 1,5—3 mm altae dentibus anguste deltoideis acutis 0,5 ad 1,5 mm longis, inferioris 1,5—2,5 mm longae dentibus anguste deltoideis acutis; corollarum coccinearum tubo 12—25 mm longo superne gradatim ampliato, labia superiore 4—5 mm alta emarginata, inferiore subaequilonga; staminibus supra tubi medium positis, breviter exsertis; nuculis oblongo-obovatis, 1,5 mm longis.

Ecuador: Prope Quito, Bonpland; ad Tungurahua, ad Baños, 1200—1500 m, Bonpland 3200; prope Quito, Bonpland 3067; prope Latacunga, Bonpland 3067; prope Riobamba, Bonpland 3067; in monte ignivomo Cotopaxi, Bonpland 3070, ad Rio Chambo, Bonpland 3200, prope Guapulo, 2650 m, 5. XI. 1827, Firmin 250; prope Guapulo, 8000—9000 ped., Jameson 650, 649, 659; in monte ignivomo Cotopaxi, II. 1856, Remy; Ambato, II. 1846, Remy; prope Guapulo, Hartweg 1339 (partim); ad sepes in planitie Rumibamba prope Quito, Hartweg 1340; in altaplanitie Latacunga et prope Cotopaxi, 7800 ped., Wagner; prope Riobamba, Ambato et Gualabamba, 1800—2700 m, 25. XI. 1880, Lehmann 149; ad Riobamba, 2800 m, Rimbach 139; Banos 2200 m, Tate 607; Punin Quebrada Chalan, 3000 m, 28. X.—4. XI. 1923, Anthony et Tate 423; ad Riobamba, 11. VIII. 1920, Holway 870; prope pagum Guapulo, 2500 m, 15. I. 1920, Heilborn 180; sine loco Jos. Jussieu.

3. **S. cercocarpoides** Epl. in Fedde, Rep. Beih. 85, 153, 1936. — *S. Kunthii* var. *nervosa* Briq. in Ann. Conserv. et Jard. Genève 2, 189, 1898.

Frutex pulchellus cortice discedente ramulis pubescentibus, internodiis 3—8 mm longis; foliorum laminis rhomboideo-obovatis. 8—16 mm longis. 4—7 mm latis, obtusis, infra medium ad petiolos subnullos cuneato-angustatis, margine integra anguste revoluta, pagina superiore appresso-hirtella, inferiore appresso-tomentella, ambobus subsericeis, venis prominulis; floribus 1—3 in verticillastris pedicellis 3—5 mm longis elatis; calycum tubo extus hirtello, in maturitate tubo 7 mm longo, labiae superioris 1 mm longae dentibus ad medium connatis deltoideis acutis, inferioris fere 3 mm longae dentibus subulatis; corollarum tubo 16—17 mm longo arcuato, labia superiore 4 mm alta, inferiore subaequilonga; nuculis non visis.

Ecuador: (?) Prope Quito. Hartweg 1339 (partim). — Colombia: Taquina: Ad Rio Hacha. 2200—3000 m, II. 1844, Linden 1623; ad Rio Hacha, 7000 ped., 1852, Schlim 834.

4. **S. Loeseneriana** Mansf. in Bot. Gart. Berlin-Dahl. Notizbl. 9, 287, 1925. — (?) *S. Andrei* Epl. in Ann. Mo. Bot. Gard. 14, 68. 1927.

Frutex altitudine ad 1 m ramulis pilis extensis brevissimis cinereis; foliorum laminis 9—22 mm longis, 3—8 mm latis, ellipticis interdum elliptico-obovatis in apice vel obtusis vel acutiusculis in basi ad petiolos subnullos angustatis margine integra interdum remote leniterque serrulata. paginis ambobus pilis brevissimis cinereo-irrasis; floribus in foliorum axillis plerumque solitariis pedicellis circiter 1 mm longis elatis; calycum tubo extus minutissime cinereo-irraso circiter 4,5 mm longo, labiae superioris 1,5 mm longae dentibus deltoideis vel deltoideo-subulatis acutis 0,6—1 mm longis, inferioris dentibus similibus 1,5—1,8 mm longis; corollarum violacearum tubo 12 mm longo, labia superiore 2,5 mm alta emarginata, inferiore paulo longiore; staminibus supra tubi medium positis breviter exsertis; nuculis non visis.

Colombia: Prope Cisne, 30. X. 1876, André 4331.

5. **S. taxifolia** (Kunth) Briq. l. c. 2, 192, 1898. — *Gardoquia taxifolia* Kunth l. c. 2, 312, 1817. — *Thymus taxifolius* Willd. ex Benth. in Linnaea 11, 342, 1837.

Frutex rigidus foliolosus ramulis pubescentibus; foliorum confertorum laminis coriaceis, 10—15 mm longis, 1—3 mm latis, lineari-lanceolatis vel linearibus. acutis, sessilibus, margine integra revoluta, pagina superiore glabra subnitida, inferiore minute cinereo-puberula; floribus in foliorum axillis solitariis pedicellis 2—3 mm longis elatis; calycum tubo extus minute

puberulo 4—4,5 mm longo, labiis subaequilongis circiter 2 mm longis, superioris dentibus lanceolato-subulatis infra medium connatis, inferioris lanceolato-subulatis; corollarum tubo 2 cm longo, labia superiore 3,5 mm alta, inferiore subaequilonga; nuculis non visis.

Ecuador: In paramo de Saraguru juxta pagum Ona, Bonpland 3310; ad Rio Pamar et Sigsig, 2000—2800 m, Lehmann 6492.

6. **S. glabrata** (Kunth) Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV, 3a, 300, 1897. — *Gardoquia glabrata* Kunth l. c. 2, 313, 1817. — *S. taxifolia* Epl. in Ann. Mo. Bot. Gard. 14, 67, 1927 et Benth. in DC., Prodr. 12, 236, 1848 (non Briq. l. c.).

Frutex foliolosus ramosior altitudine 1—2 m ramulis brevissime puberulis; foliorum coriaceorum confertorum laminis maximam partem 10—12 mm longis, ellipticis interdum elliptico-obovatis, in apice acutiusculis vel obtusis in basi ad petiolos subnullos angustatis, margine integra paginis ambobus subnitidis glabris, venis prominulis; floribus in foliorum axillis plerumque solitariis pedicellis circiter 1 mm longis elatis; calycum tubo 5—6 mm longo extus brevissime puberulo, labiae superioris 1,5—1,8 mm altae dentibus circiter 1 mm longis deltoideo-ovatis, inferioris dentibus anguste deltoideis acutis 1—1,2 mm longis: corollarum coccinearum tubo 15—18 mm longo, labia superiore 3—3,5 mm alta emarginata inferiore paulo breviore; staminibus ad tubi medium sitis breviter exsertis; nuculis non visis.

Ecuador: Prope Loja, VII. 1864, Jameson: prope Loja, Hartweg 808; prope Loja, Lobb 233; prope Loja, 29. IX. ad 3. X. 1918, Rose 23279; inter La Toma et Loja 1800—2600 m, 4. IX. 1923, Hitchcock 21437; inter San Lucas et Ona, 2200 ad 3100 m, 7. IX. 1923, Hitchcock 21527; verisimiliter prope Loja, Bonpland.

7. **S. lineata** Epl. in Fedde, Rep. Beih. 85, 154, 1936. — *S. glabrata* Epl. in Ann. Mo. Gard. Bot. 14, 66, 1927 (non Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV, 3a, 300, 1897).

Frutex dense foliolosus ramulis pubescentibus; foliorum confertorum laminis coriaceis 6—9 mm longis, elliptico-ovatis, in apice acutiusculis, in basi angustatis, etiam rotundatis, sessilibus, margine subintegra, paginis ambobus glabris, superiore nitida, inferiore punctata, venis subtus parallelis pulchre elevato-striatis; floribus in axillis tribus interdum solitatim dispositis, pedicellis 1,5—2 mm longis elatis; calycum tubo extus glabro

4,5—5 mm longo, labiae superioris 3—3.8 mm longae dentibus subulatis 2—2,5 mm longis, omnibus subrecurvo-patentibus; corollarum tubo circiter 18 mm longo, labia superiore 7—8 mm alta emarginata, inferiore 5—6 mm longa; staminibus supra tubi medium positis, breviter exsertis; nuculis non visis.

Ecuador: Prope Tablon de Ona, 27. IX. 1918, Rose 23083.

8. S. **Jamesoni** (Benth.) Briq. in Engler u. Prantl, Natürl. Pflanzenfam., ed. 1, IV, 3a. 300. 1897. — *Gardoquia microphylla* Kunth l. c. 2, 311, 1817. — *G. Jamesoni* Benth., Lab. Gen. et Sp. 404, 1834 et in DC., Prodr. 12, 239, 1848. — *S. ericoides* Willd. ex Benth. in Linnaea 11, 328, 1837 (nomen). — *S. microphylla* Briq. l. c., ed. 1. IV, 3a, 300, 1897. — *S. connata* Epl. in Ann. Mo. Bot. Gard. 14, 70, 1927.

Frutex dense foliolosus ericoides humilis ramulis pilis brevibus pubescentibus; foliorum laminis subsessilibus 2—3 mm longis ovatis, in apice obtusis, in basi frequenter cordatis, margine integra, paginis ambobus fere glabris minutissime hirtellis, superiore interdum nitida, venis subtus prominulis; floribus in foliorum axillis solitariis pedicellis 1—1,5 mm longis elatis; calycum tubo 3,5—5 mm longo, extus brevissime puberulo interdum glabro, labiae superioris 1—1,5 mm longae dentibus deltoideo-ovatis 0,3—0,5 mm altis, inferioris dentibus 1,2 mm longis deltoideo-ovatis acutis; corollarum coccinearum tubo 12—18 mm longo; staminibus supra tubi medium sitis breviter exsertis; nuculis non visis.

Colombia: Narino: Ad Turquerres, 3000 m, Triana; in montibus prope Pasto, Jameson 477. — Ecuador: Ad Paramo de Antisana, 3500 m, Jameson; in monte ignivomo Azufral, André 1564; in Paramo inter Cuenca et Huigra, 2200—3000 m, 12.—13. IX. 1923, Hitchcock 21693; prope Canar, 15. IX. 1918, Rose 22720; inter Ibarra et Tulcan, 3000 m, 10.—11. VIII. 1923, Hitchcock 20793; in monte ignivomo Copac-urao et Condorato, 3000—4000 m, Wagner; prope Cuenca, VII. 1864, Jameson; in monte ignivomo Azufral, Karsten; ad Tulcan prope Rio Blanco, Bonpland 2186; Tejerra de Santa Lucia, 2100 m.

9. S. **stachyodes** Epl. in Fedde, Rep. Beih. 85, 156, 1936. — *G. fasciculata* Benth., Pl. Hartweg. 243, 1839 et in DC., Prodr. 12, 239, 1848. — *S. rigidula* Epl. in Ann. Mo. Bot. Gard. 14, 72, 1927 (non Jord. et Fourr., Brev. Pl. Nov. Fasc. 1, 46, 1866). — *S. fasciculata* Briq. l. c., ed. 1, IV, 3a, 300, 1897 (nec Rafin., Prec. Decouv. 39, 1814, nec Tausch in Syll. Ratisb. 2, 248, 1828).

Frutex rigidulus humilis altitudine 40—80 cm ramulis lateralibus numerosis brevibus cinereo-pubescentibus; foliorum laminis in axillis fasciculatis, sessilibus, 3—5 mm longis, maximam partem lineari-oblongis interdum anguste deltoideis, obtusis, margine plerumque ad venam mediam revoluta, pagina superiore hirtella, inferiore cano-tomentella ad venam mediam hirsuta; floribus in foliorum supremorum fasciculato-congestis spicas interdum interruptas ad 30 cm longas facientibus; calycum tubo extus pubescente 2,5 mm longo; labiae superioris circiter 2 mm longae dentibus 1,2—1,5 mm longis deltoideo-lanceolatis acutis, inferioris dentibus similibus 1,7—2 mm longis; corollarum caerulearum tubo 6—8 mm longo, patentim arcuato, labia superiore 1,5 mm alta emarginata, inferiore 3 mm longa; nuculis 1 mm longis, oblongis.

Ecuador: In regione media montis Pichincha, 4. II. 1920, Heilborn 296; ad marginem viae ad flumen Machangara prope Quito, 16. IV. 1920, Heilborn 536; prope Quito, Bonpland 2084; prope Pasto, Bonpland; in apricis prope Quito, 8000 ped., 21. I. 1856, Jameson 181; in planitie Pomasqui et San Antonio, 2700 m, Jameson; in monte ignivomo Imbabura, 2300—3000 m, ad Rio Chota, 6. VI. 1876, André 3583; in planitie Rumibamba necnon juxta pontem Guapulo prope Quito, Hartweg 1338; Rio Chota et San Antonio de Lalumba et Calicali, Lehmann 6347; prope Alausi, 2500 m, 19.—27. VII. 1923. Hitchcock 20719, 20705.

10. **S. caerulescens** Epl. l. c. **85**, 156, 1936. — *Calamintha caerulescens* Wedd., Chloris Andina **2**, 149, t. 63, 1860. — *Hedeoma caerulescens* Benth. in DC., Prodr. **12**, 245, 1848. — *Satureia Lindeniana* Briq. in Ann. Conserv. et Jard. Bot. Genève **2**, 191, 1898. — *Clinopodium caerulescens* Kuntze, Rev. Gen. **2**, 515, 1891 (nomen).

Suffrutex vel herba perennis humilis altitudine circiter 15 cm caulibus e caudice lignoso erectis virgatis pubescentibus; foliorum laminis 3,5—4,5 mm longis sessilibus erectis lineari-oblongis, obtusis, in basi rotundatis, marginibus integris valde replicatis et infra venam mediam conniventibus paginam inferiorem cano-tomentosam itaque toto adumbrantibus, paginae superioris facie superiore pubescente, inferiore glaberrima; floribus in foliorum axillis pedicellis 1 mm longis elatis; calycum tubo extus pubescente 3—3,5 mm longo. labiae superioris 2 mm longae dentibus deltoideo-subulatis acutis circiter 1 mm longis, inferioris dentibus subulatis acutissimis 3—3,3 mm longis; corollarum ? caerulearum tubo 8 mm longo.

labia superiore 1 mm alta emarginata, inferiore 2 mm longa; staminibus sub labiam superiorem ascendentibus; nuculis non visis.

Colombia: Magdalena: In Sierra Nevada de Santa Marta, Funck 394, Purdie; prope Rio Hacha in Sierra Nevada de Santa Marta 3600 m, III. 1852, Schlim 821; prope Rio Hacha, 12000 ad 13000 ped., II. 1844, Linden 1688, 1622; paramos de Sierra Nevada de Santa Marta, VII. 1932, Seifriz 456.

11. **S. mutabilis** Epl. l. c. 85, 157, 1936. — *S. breviflora* Epl. in Ann. Mo. Bot. Gard. 14, 59, 1927 (non Briquet in Engler u. Prantl, Natürl. Pflanzenfam., ed. 1, IV, 3a, 300, 1897).

Frutex humilis ramulis pilis extensis sparse pubescentibus; foliorum laminis forma et magnitudine valde variis nunc rotundis 5—8 mm diametro nunc ellipticis 3—4 mm longis maximam partem ellipticis 1—2 cm longis, utrimque obtusiusculis, in basi ad petiolos 1—3 mm longos angustatis, pagina superiore viride sparse hirtella venis impressis, inferiore cinereo-pubescente, margine serrulata vel crenulata; cymulis densis sessilibus plerumque 3 ad 15 floribus in foliorum supremorum deminutorum axillis congestis saepe spicas interruptas formantibus; calycum tubo extus pilis extensis pubescente interdum subglabro, 2—2,5 mm longo, dentibus deltoideo-lanceolatis subaequilongis 1,2—1,5 mm longis acutis; corollarum (?) albarum tubo 4—4,5 mm longo intus piloso, labia superiore 1 mm alta emarginata, inferiore circiter 1.5 mm longa; staminibus ad fauces positis vix exsertis; nuculis non visis.

Ecuador: In andibus quitensibus, Jameson; prope Cañar, 16. IX. 1918, Rose 22741; prope Alausi, Humboldt; prope Cuenca, IX. 1918, Rose 22938.

12. **S. tenella** Epl. l. c. 85, 161, 1936.

Herba tenella prostrata repens ramosa caulibus gracilibus pilis extensis brevissimis conspersis, internodiis 5—15 mm longis; foliorum laminis rotundato-reniformibus 3—8 mm diametro in basi truncato-subcordatis petiolis 2—3 mm longis elatis, margine subintegra sinuato-subcrenata, paginis ambobus glabris; floribus in foliorum axillis solitariis pedicellis circiter 1 mm longis elatis bracteolis binis parvis ornatis; calycum tubo extus pilis brevibus extensis vestito 1,5—1,8 mm longo, in maturitate nuculis distento labiis vix 1 mm longis, dentibus deltoideis acuminatis vel acutis tribus posticis infra medium connatis, faucibus sparse hirsutis; corollarum violacearum tubo 3,5 mm longo intus inter staminum bases piloso; staminibus inclusis; nuculis atris verrucosis ovatis 1 mm longis.

It is possible that this proposed species is better considered an extreme form of *S. nubigena*, yet in aspect the two are quite different, *S. tenella* recalling the habit of *S. Brownei*. The difference in calyx size appears to be constant.

Ecuador: In altaplanitie Quitensi, Jameson 140. 109; in monte Mul-mul, XI. 1857, Spruce 5152.

13. **S. nubigena** Briq. l. c., ed. 1, IV. 3a, 300, 1897. — *Thymus nubigenus* Kunth l. c. 2, 316, 1817. — *Micromeria nubigena* Benth., Lab. Gen. et Sp. 381, 1834. — *Thymus humifusus* Willd. ex Benth. in Linnaea **11.** 342, 1837 (nomen). — *Micromeria nubigena* var. *glabrescens* Benth. in DC., Prodr. **12,** 222, 1848. — *Clinopodium nubigenum* Kuntze l. c. **2.** 515, 1891 (nomen).

Herba prostrata repens fragrans ramosissima ramis ramulisque gracilibus atris nunc pilis brevissimis puberulis nunc hispidulis; foliorum laminis approximatis 2—4 mm rarius 10 mm longis, plerumque ovatis in apice obtusis, in basi ad petiolos circiter 1 mm longos angustatis, interdum late ovatis et in basi rotundato-subtruncatis, marginibus integris vel obscure crenatis, paginis ambobus plus minusve breviter hispidulis, interdum glabris; floribus in foliorum axillis solitariis; calycum tubo extus hispido 2—2,5 mm longo, faucibus subnudis, dentibus deltoideis 0,6 ad 1 mm longis acutis, tribus posticis in basi connatis itaque minoribus; corollarum nunc albarum nunc violacearum tubo 3—4 mm longo, superne sat ampliato, intus pubescente; staminibus circiter 1 mm longis supra tubi medium sitis; nuculis 0,8—0,9 mm longis, atris.

Venezuela: Merida: In paramo Sto. Domingo, 3600 m, 14. IX. 1922, Jahn 1151; Laguna verde, paramo Mucuchies, 3600 m, 1922, de Bellard 19; in paramo Quirora, 3200 m, 24. II. 1922, Jahn 882; in Sierra Nevada 3000 m, VII. 1846, Funck et Schlim 1169.

Colombia: Caldas: In paramo del Quindio, 3700—4200 m, 15.—20. VIII. 1922, Pennell et Hazen 10001; Tolima: in paramo de Ruiz, 3000 m, Purdie; in paramo de Ruiz, 3000 m, 1918, Dawe 750; in paramo de Ruiz, 3500—4000 m, 16.—17. XII 1917, Pennell 3015; El Cauca: in paramo de Guanacas, Hartweg 1336; sine loco, Bonpland 3031; in paramo de Guanacas, 3000 ad 3500 m, Lehmann 4719; prope Canaan, in monte Purace, ad Rio Anambiu 2900—3200 m, 11.—16. VI. 1922, Killip 6732; in monte Purace, Bonpland 2023; in paramo de Ruiz 3000—3500 m, 11. IX. 1883, Lehmann 3111.

Ecuador: In andibus prope Quito, 4200 m, Couthouy: inter Urbina et montem Chimborazo, 3600—4500 m, 4. X. 1923, Hitchcock 21987: prope La Rinconada inter Ibarra et Tulcan, 3000 m, 10.—11. VIII. 1923, Hitchcock 20787; inter Ona et Cuenca, 2700—3300 m, 9.—10. IX. 1923, Hitchcock 21635; in paramo de Navas-Cruz prope Riobamba, 3800 m, Lehmann; in andibus quitensibus, 13000 ped., Jameson 217; in monte Antisana, 3600 m, Jameson; Hacienda de Antisana, Hartweg 1337; in paramo de Tuza, 3400 m, 31. I. 1881, Lehmann 3092; prope El Altar, in paramo, 3300—4000 m, VII. 1903, Meyer 235: in monte ignivomo Rucu-Pichincha, Bonpland 3031; in monte Atacatzo, 1300 m, 12. V. 1920, Heilborn 613.

14. **S. Brownei** (Sw.) Briq. l. c., ed. 1, IV, 3a, 300, 1897. — *Thymus Brownei* Swartz. Prodr. Veg. Ind. Occ. 89, 1788 et in Fl. Ind. Occ. 2, 1011. 1800. — *Micromeria Brownei* Benth., Lab. Gen. et Sp. 372. 1834 et in DC., Prodr. 12, 223, 1848. — *Clinopodium Brownei* Kuntze. l. c. 2, 514, 1891 (nomen). — *S. Brownei* subsp. *eubrownei* Epl. in Ann. Mo. Bot. Gard. 14, 51, 1927.

Herba humilis prostrata repens caulibus gracillimis glabris angulis acutis; foliorum laminis membranaceis viridibus plerumque 0.5—1 cm diametro vel late deltoideis vel ovato-rotundis, in apice obtusioribus in basi subtruncatis et in petiolos graciles 1—8 mm longos abrupte angustatis, margine leniter sinuato-crenata subintegra, paginis ambobus glabris: floribus in foliorum laminis solitariis, pedicellis gracilibus calycem aequantibus elatis; calycum tubo extus glabro 2,5—3 mm longo, labiae superioris circiter 1 mm longae dentibus ovatis obtusis circiter 0.8 mm longis inferioris dentibus 1—1,2 mm longis deltoideo-ovatis obtusis; corollarum violacearum tubo 3,5 mm longo, labia superiore 1 mm alta emarginata, inferiore paulo longiore; staminibus supra tubi medium positis; nuculis 0,8—1 mm longis oblongis atris.

Venezuela: Galipan, 1250 m, 7. VI. 1885. Jahn 201; Paramo de la Sol. Merida, 1. IX. 1921, Jahn 569, 610; inter Antimano et Aguas Negras, 900—1500 m, 6.—7. IV. 1913, Pittier 6017; prope Coloniam Tovar, Fendler 869; Paramo del Tambor, Merida, 2400 m, 14. XI. 1921, Jahn 736, 738; inter Coloniam Tovar et Lagonazo, 1700—2300 m, 21. II. 1921, Pittier 9262; Paramo del Jabon. 3000—3200 m, 2. X. 1910, Jahn 41; in Paramo de Pinango, 2600 m, 17. III. 1915, Jahn 410; prov. de Carabobo, 2000 m, V. 1846, Funck et Schlim 632.

Colombia: Antioquia: Ad vias in graminosis prope Caramanta, 19. IX. 1922, Pennell 10777; Caldas: in silvis prope Los

Minitas ad Caldas, 2000—2500 m, 21.—22. IX. 1922, Pennell 10941; in silvis ad Pinares prope Salento, 2.—10. VIII. 1922, Pennell 9243; ad Rio Quindio in graminosis prope Salento, 27.—30. VII. 1922, Killip et Hazen 9040; in agris ad Santa Elena, supra Santuario, 7.—13. IX. 1922, Pennell 10592; Cundinamarca: prope Bogota, Goudot; in Cordillera de Bogota. 2700 m, Triana; Sabanas de Bogota, Fr. Ariste-Joseph 903; prope Quaranda, 8. VII. 1876, André 1016; in montibus prope Bogota, 2800 m, 6. VI. 1875, André 1016; in silvis prope Susumoco ad Quetame, 1200—1400 m, 5. IX. 1917, Pennell 1735; El Cauca: in collibus Popayan, 1700—2000 m, Lehmann 5961; Cuesta de Tocota, versus Buenaventura, 1500—1900 m, XII. 1905, Pittier 724; in silvis prope Huila, 1.—8.VIII. 1917, Rusby et Pennell 625; in pratis prope Balsillas, Huila, 2000—2100 m. 3.—6. VIII. 1917, Rusby et Pennell 727; in rupibus ad Rio San Andreas, prope Coconuco, 14.—19. VI. 1922, Pennell 7157; in montibus Popayan, Hartweg 1335; prope Huila in valle Rio Paez, 1600—1900 m, I. 1906, Pittier 1242; ad rivulum prope San Isidro, 10.—11. VI. 1922. Pennell et Killip 6430; in dumetis infra San José ad San Antonio, I. VII. 1922, Pennell 7654; Santander: inter Picde Cuesta et Las Vegas, 2000—2500 m, 19. ad 24. XII. 1926, Killip et Smith 15499; in monte San Vincente prope Charta, 2500—2700 m, in silvis humidis 9. II. 1927, Killip et Smith 18992; in Paramo de las Puentes prope La Baja, 3300 ad 3400 m, 25.—31. I. 1927, Killip et Smith 18732; prope La Baja. 3000 m, 14.—31. I. 1927, Killip et Smith 18113.

Ecuador: Prope Quito, Bonpland; in monte Rucu-Pichincha, Bonpland; prope Huigra. 12. IX. 1918, Rose 22627; sine loco Jos. Jussieu.

Minthostachys.

Minthostachys Griseb. in Goett. Abh. (Pl. Lorentz.) 19. 235, 1874. — *Bystropogonis* sectio *Minthostachys* (Griseb.) Benth., Lab. Gen. et Sp. 325, 1834 et in DC., Prodr. 12, 185, 1848. — *Minthostachys* Spach, Hist. Veg. Phan. 9, 164, 1840 (nomen nudum). — *Minthostachys* Bunge in Mém. Acad. Imp. Sci. St. Pétersb., sér. 7, 21, Nr. 1, p. 1—84, 1873 (nomen nudum).

Suffrutices maximam partem scandentes et innixi aromatici. ramis late divaricatis; foliorum laminis nunc ovatis nunc ovato-lanceolatis; floribus in cymulis subscorpioideis saepe binis vel sessilibus vel pedunculatis in foliorum axillis congestis interdum spicas interruptas formantibus, bracteis subfoliosis et bracteolis setaceis subtentis; calycibus tubulosis, 13—(12) venis, leniter bi-

labiatis, dentibus subulatis vel anguste deltoideis, duobus anticis longioribus, omnibus erectis rarius recurvo-patentibus, faucibus intus hirsuto-annulatis; corollarum albarum in faucibus saepius maculatarum tubis superne gradatim ampliatis intus hirtellis, labiis rotundatis, superiore bifida, inferiore trifida lacinia media majore; staminibus parvis ad tubi medium sitis didymis, thecis leniter divaricatis, connectivo sat parvo subdeltoideo; stylo paulo exserto, ramis planis acutis; nuculis fuscis.

Corollarum tubi 2,5—4 mm longi (saepius c. 3 mm) *M. mollis*
Corollarum tubi 3,5—5 mm longi (saepius c. 4 mm)
Calycum dentes tubum aequantes vel superantes *M. setosa*
Calycum dentes quam tubus breviores . . . . *M. tomentosa*

1. **M. mollis** Griseb. l. c. 19, 235, 1874. — *Bystropogon mollis* Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. Pl. 2, 317, 1817. — *Mentha mollis* Benth., Lab. Gen. et Sp. 182, 1833. — *B. canus* Benth. l. c. 326, 1834. — *B. Pavonianus* Briq. in Ann. Conserv. et Jard. Bot. Genève 2, 193, 1898.

Suffrutex subscandens altitudine ad 3 m caulibus infime glabratis superne pilis extensis hirsutis, internodiis sat elongatis, ramulis late divaricatis; foliorum laminis nunc ovatis nunc ovato-lanceolatis 1—5 cm longis (saepius 2—4 cm), in apice acutiusculis vel obtusis frequenter acuminatis, in basi rotundatis margine leniter serrata vel subintegra, pagina superiore nunc hirtella nunc hirsuta, rarius omnino glabra, inferiore nunc molliter incano-tomentosa nunc solum ad venas vestita rarius fere glabra, pedicellis 2—10 mm longis elatis; floribus in cymulis compactis nunc in foliorum axillis inter se 1—4 cm distantibus nunc in spicastra ad ramulorum apices confertis; calycibus 2,5—4 mm longis extus praesertim ad basim hirsutissimis, dentibus 0,6—1,5 mm longis acuminato-subulatis, duobus anticis longioribus; corollarum tubis 2,5—4 mm longis (saepius circiter 3 mm).

B. canus was based by Bentham upon a Pavon plant in Lambert's herbarium, now lost. In Bentham's herbarium is a sheet bearing two dissimilar, but I believe, conspecific plants with a single characteristic Pavon label. Upon this label Bentham has written „*Bystropogon canum*". Of the three fragments on the sheet the most ample corresponds with Bentham's description and name and I accordingly consider it as the type in absence of the authentic Lambert specimen. Furthermore Bentham applied this name to a similar specimen, doubtless of the same collection, in the Hooker herbarium, differentiating it from a dissimilar associated

specimen which he named *B. tomentosus.* A third very similar plant lies in the herbarium of the Natural History Museum at Paris and a fourth in the Delessert Herbarium at Geneva. All are so strikingly similar as to convince me that they are of the same collection, perhaps from the same plant. Upon the fragment at Geneva was based *B. Pavonianus* by Briquet. It is assuredly conspecific with *B. canus* of Bentham.

But I have nowhere seen a more recently collected plant which is exactly similar to the Pavon plant. The nearest approach lies in a specimen collected by Goudot at Bogota, now in the Museum at Paris. Pennell. Killip and Hazen 8748, collected at Caldas, Solento, Colombia. is similar in pubescence. Yet these localities are far removed from the type locality in Peru (which I believe was Chinchao). Except in the leaf shape I am unable to perceive any marked differences from *B. mollis* of Kunth, and I believe *M. canus* is merely a narrow leaved form of that species. The single factor to disturb this conclusion is that all of the plants from Ecuador and Peru which I have seen have leaves which are uniformly more ovate. Only in Colombia and Venezuela do the leaves become narrower. It is possible that I have here confused two races or species. If so, the name *M. canus* might be applied to the plant with narrow leaves. Considering the several diverse forms from the region of Bogota I am at present unable to perceive in it any more than a variation to be expected.

Venezuela: La Guayra ad Caracas, 7. V. 1874, Kuntze; in Cerro de Turumiquire, 2000 m. 1925, Tate 348, 349; Los Venados ad Caracas, X. 1924, Allart 42; in montibus prope Caracas et ad coloniam Tovar, 5000—6800 ped., 1854, Fendler 891; in Paramo de Timotes, Merida, 2000 m, 20. I. 1928, Pittier 12650.

Colombia: Santander: Inter Surata et California, 1740 ad 2000 m, 8.—11. I. 1927, Killip et Smith 16791; El Cauca; in dumetis Cuatro Esquinas, 1700—1800 m, 5. VI. 1922, Pennell et Killip 6370; Cundinamarca: Fenasuca prope Bogota, 1855. Triana; Santander prope Surata, 1600—1800 m, 4.—10. I. 1927, Killip et Smith 16520; Cundinamarca: ad Guaduas, VII. 1923, Fr. Ariste-Joseph A 998; Cundinamarca: in Cordillera de Bogota, Triana; Huila: prope Neiva in dumetis, cordillera oriental, 1.—8. VIII. 1917, Rusby et Pennell 900; El Cauca: in monte Chapaque 2800 m, 29. X. 1875, André 1005, 1006, 965; Cundinamarca: prope Bogota, Goudot; El Cauca: in monte Purace, 2500—3800 m, 11.—13. VI. 1922, Pennell et Killip 6491: Santander: prope Charta, 2000—2600 m, 1.—11. II. 1927, Killip et Smith 19095; Caldas: Salento, 1800—2100 m, 25.—31. VII.

1922, Pennell, Killip et Hazen 8748; Cundinamarca: Sebate 2800—2900 m, 13.—15. X. 1917, Pennell 2507: prope Bogota, 1914, Fr. Ariste-Joseph A 225; El Cauca: prope Cali, 1000 ad 1200 m, Lehmann 7873; El Cauca; ad vicum Totoro ad Popayan, Hartweg 1333.

Ecuador: Prope Cuenca, 2500—3000 m, Lehmann 5823; prope Loja, Seemann 722; Tumbaco, IV. 1873, André; ad Cotocollao, in altaplanitie Quitensi, 1923, Mille 412: Cuenca, 10. IX. 1920, Holway 978; Huigra, Chimborazo, 1200 m, VII. 1923, Hitchcock 20304, 20375; prope Ambato, Tungurahua, II. 1919, Pachano 105; in monte Pichincha, Hall 89; prope Quito, Jameson 300, 805; in valle La Magdalena, Pichincha, 1927, Firmin 68; in valle Chillo prope Santa Rosa, 3200 m, 1923, Anthony et Tate 203; prope Quito et in valle Chillo, Hartweg 1334: in altaplanitie montium prope Quito, Riobamba Nueva et Cuenca, Bonpland; Paramo de Tuga, 2800—3200 m, Lehmann 4684; prope Huigra praesertim apud Hacienda de Licay, 6. IX. 1918, Rose 22536; in loco eodem, 20. VIII. 1918, Rose 22248.

2. **M. tomentosa** (Benth.) Epl. in Fedde, Rep. Beih. 85, 165, 1936. — *Bystropogon tomentosus* Benth. l. c. 326, 1834.

Suffrutex verisimiliter subscandens caulibus mox glabratis, superne pilis extensis hirsutis, internodiis sat elongatis, ramulis late divaricatis; foliorum laminis ovatis 1—5 cm longis, (saepius 2—4 cm) in apice saepius obtusis, in basi rotundatis, margine leniter serrata vel subintegra, pagina superiore saepius hirtella, inferiore molliter incano-tomentosa, pedicellis 2—10 mm longis elatis; floribus in cymulis compactis maximam partem in foliorum axillis dispositis rarius in spicastra ad ramulorum apices confertis; calycibus 3,5—4 mm longis extus praesertim ad basim hirsutissimis, dentibus 1,5—2 mm longis, acuminato-subulatis, duobus anticis longioribus; corollarum tubis 3,5—4 mm longis (saepius circiter 4 mm).

Colombia: Santander: Prope Vetas, 3000—3250 m, in collibus saxosis, 16.—20. I. 1927, Killip et Smith 17297, 17248; prope Las Vegas, 2500—3000 m, 21.—23. XII. 1926, Killip et Smith 16067; Narino: Turquerres, V. 1853, Triana: Turquerres, Engels; El Cauca: ad Popayan, 28. VIII. 1881, Lehmann 926.

Ecuador: Carchi: Tulcan, 2500 m, 10. VIII. 1923, Hitchcock 20990.

3. **M. setosa** (Briq.) Epl. l. c. 85, 166, 1936. — *Bystropogon setosus* Briq. in Bull. Herb. Boiss. 4, 801, 1896.

Suffrutex aromaticus altitudine ad 2 m caulibus glabratis superne villosis, ramulis late divaricatis villosis; foliorum laminis maximam partem ovatis, 2—7 cm longis, in apice leniter acuminatis, in basi rotundatis, marginibus subserratis, paginis ambobus viridibus, sparse hirtellis, petiolis ad 1,5 cm longis elatis; floribus in cymulis compactis in foliorum axillis dispositis interdum ad ramulorum apices confertis; calycibus extus hirsutis 3—5 mm longis, dentibus deltoideo-lanceolatis vix acuminatis 1,5—2,5 mm longis tubum subaequantibus; corollarum tubis 3—5 mm longis.

Ecuador: In valle de Ponga, 2300 m, X. 1858, Spruce 5569; sine loco Spruce 5488.

Scutellaria.

Scutellaria L., Sp. Pl. 598, 1753 et Gen. Pl., ed. V, 260, 1754. Cruzia Philippi in Anal. Univ. Chil. **90**, 558, 1896.

Herbae tenellae vel suffrutices habitu variae; floribus nunc in foliorum plus minusve deminutorum oppositis nunc in bracteorum saepius caducorum axillis oppositis vel tres et quatuor in pseudoverticillastris dispositis: calycibus florentibus campanulatis bilabiatis, labiis aequalibus integris rotundato-truncatis, superiore maximam partem gibbo parvo dorsaliter ornata, in maturitate ambobus auctis inferiore saepius subplana interdum perstata conico-concava, superiore decidua nunc conico-concava nunc in scutellum transversum erectum compressum producta; corollarum coccinearum flavarum vel caerulearum tubo cylindrato recurvo-ascendente vel arcuato intus nudo e calyce longe exserto in faucibus dilato, labia superiore galeata interdum emarginata, inferiore longiore trifida, laciniis lateralibus nunc liberis nunc cum labia superiore coalitis; staminibus sub labiam superiorem ascendentibus-inferiorum antheris dimidiatis: styli ramo postico brevissimo; nuculis ovatis in gynophoro elevatis nunc asperulis nunc tuberculatis etiam lacerato-angulatis.

Flores in foliorum frequenter deminutorum axillis oppositi
- Herbae sat parvae foliis hastatis habitu Rumicis acetosellae (*Galericularia*) . . . . *S. racemosa*
- Suffrutices usque ad 3 m alti
  - Calycum maturorum labiae subaequaliter conico-concavae, superior leniter lateraliter compressa nec in scutellum transversum concavum producta (*Perilomia*)
    - Folia fere glabra subtus ad venas hirtella; nuculae eroso-angulosae
      - Corollarum tubi 12—14 mm longi . . . *S. ocymoides*

Corollarum tubi 7—8 mm longi . . . . *S. Perilomia*

Folia praesertim subtus hirsuta; nuculae papillosae nec angulosae . . . . *S. volubilis*

Calycum maturorum labiae inaequales inferior subplana, superior in scutellum transversum concavum producta (*Perilomioideae*) . . . . *S. sarmentosa*

Flores in racemis in bracteorum parvorum saepius deciduorum axillis dispositi, suboppositi vel tres et quatuor in pseudoverticillastris instructi; herbae vel suffrutices debiles diffusi (*Heteranthesia*)

Corollae saepius caerulescentes rarius albae. tubis maximam partem 5—12 mm longis (12—20 mm *S. tubiflorae*) (*Uliginosae*)

Corollarum tubi 5—9 mm longi

Corollarum tubi 5—6 mm longi . . . . . *S. agrestis*

Corollarum tubi 7—9 mm longi . . . . . *S. purpurascens*

Corollarum tubi 10—12 mm longi

Herbae erectae foliis acutiusculis maximam partem 2,5—6 cm longis . . . . *S. breviflora*

Herbae procumbentes foliis obtusiusculis maximam partem 12—25 mm longis subintegris . . . . *S. verecunda*

Corollae saepius coccineae vel roseae rarius roseo-cyaneae tubis maximam partem 18 ad 20 mm interdum usque ad 35 mm longis (10—12 mm *S. Lehmanni*) (*Speciosae*)

Folia maximam partem elliptica utrimque subaequaliter angustata, interdum ovato-elliptica in basi vix rotundata nec cordata

Corollae unicolores nunc coccineae nunc incarnatae

Corollarum tubi 17—20 mm longi

Foliorum pagina superior glabra, inferior ad venas minute hirtella . . . . *S. coccinea*

Foliorum pagina superior hirtella inferior cinereo-pubescens . . . . *S. incarnata*

Corollarum tubi 25 mm longi . . . . . *S. Lindeniana*

Corollarum tubi 35 mm longi . . . . . *S. elliptica*

Corollae bicolores tubo roseo, labia inferiore cyanea . . . . *S. cyanocheila*

Folia maximam partem ovata in basi nunc rotundata nunc cordata
  Corollarum tubi 10—12 mm longi . . . . *S. Lehmanni*
  Corollarum tubi 17—32 mm longi
    Folia in basi patentim cordata
      Corollarum labia inferior cyanea . . . *S. cyanocheila*
      Corollarum labia inferior concolor nec cyanea
        Folia late ovata, 4—8 cm longa, paginis ambobus mollissime pubescentibus *S. Ventenatii*
        Folia oblongo-ovata, 6—12 cm longa, pagina superiore glabra, inferiore ad venas hirtella . . . . *S. albo-rosea*
    Folia in basi rotundata, infima interdum subcordata
      Folia fere glabra subtus ad venas brevissime hirtella . . . . *S. atriplicifolia*
      Folia subtus pubescentia vel hirsuta
        Corollae roseo-cyaneae . . . . *S. roseo-cyanea*
        Corollae coccineae . . . . *S. Trianae*

1. **S. racemosa** Pers., Syn. Pl. 2, 136, 1807. — *S. rumicifolia* Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. Pl. 2, 324, 1817. — *S. heterophylla* et *S. bonariensis* Willd. ex Benth. in Linnaea 11, 345, 1837 (nomina). — *S. Rojasii* Briq. in Bull. Herb. Boiss., ser. 2, 7, 600, 1907. — *S. hastata* Larranaga, Escr. D. A. Larranaga, Publ. Inst. Hist. Geogr. Urug. 2, 187, 1923.

Herba perennis glaberrima debilis ramosior caudice subterranea gracile late repente, caulibus decumbentibus radicantibus ramis ascendentibus erectisve 15—30 cm altis: foliis magnitudine et forma variis praesertim infimis 1—4 cm longis, 1—2,5 cm latis, tenuibus, hastatis, etiam deltoideis, petiolis gracilibus 3—5 mm longis elatis, supremis maximam partem deminutis, anguste hastatis vel lineari-lanceolatis, etiam linearibus vix 1 mm latis, subsessilibus, omnibus in apice obtusiusculis; floribus in foliorum praesertim deminutorum axillis solitariis, pedicellis gracilibus 2—4 mm longis elatis; calycibus florentibus 1,5—2 mm longis, in maturitate paulo auctis; corollarum rosearum tubo 3—5 mm longo, recurvo-ascendente, superne gradatim dilato, labia inferiore 2,5—3,5 mm longa; staminibus in basi pilosis, antheris ad margines ciliatis; nuculis circiter 0,7 mm diametro, tuberculosis, fuscis.

Colombia: Cundinamarca: Bogota: Prope Las Cruces, 2600 ad 2700 m, 24.—25. IX. 1917, Pennell 2159; Bogota, 2600 m,

Triana: Bogota, Linden 803; in arenosis planitie bogotensis, Hartweg 1341; Bogota, 7. III. 1854, Holton 488; ad flumen Cristobal, 2600—2700 m, 4.—8. X. 1917, Pennell 2333. — Ecuador: Prope Loja, Bonpland; „Magdalena", Bonpland.

2. **S. agrestis** St. Hil. ex Benth., Lab. Gen. et Sp. 427, 1834. Herba humilis in basi ramosa verisimiliter perennis altitudine 15—25 cm radicibus sat crassis fasciculatis, caulibus pilis brevissimis extensis puberulis; foliorum laminis 2—3,5 cm diametro, rotundato-cordatis, in apice obtusis, marginibus sinuato-dentatis, pagina superiore fere glabra, pilis appressis sparse conspersa, inferiore ad venas minutissime puberula saepe purpurascente, petiolis 8—12 mm longis elatis; racemis maximam partem 3—4 cm longis; floribus suboppositis vel tribus quatuorve in bracteorum parvorum spatulatorum perstatorum axillis dispositis, pedicellis circiter 2 mm longis elatis; calycibus florentibus circiter 1,5 mm longis, extus hirtellis, in maturitate labia inferiore 4 ad 4,5 mm longa, gibba circiter 5 mm alta; corollarum caerulearum tubo 5—6 mm longo; nuculis non visis.

Ecuador: Manabi: In sitio El Recreo, Eggers 15599.

3. **S. verecunda** Epl. in Fedde, Rep. Beih. 85, 173, 1936. Herba bella modesta verisimiliter perennis ut videtur in basi procumbens caulibus pilis brevissimis extensis ornatis gracilibus ramosis altitudine 20—40 cm; foliorum laminis ovatis, 12—25 mm longis, 10—23 mm latis, in apice nunc obtusis nunc breviter acuminatis, in basi rotundatis, petiolis 5—12 mm longis elatis, marginibus convexioribus subintegris, pagina superiore fere glabra pilis appressis sparse conspersa, inferiore ad venas minutissime puberula caeterum glabra; racemis 1,5—3 mm longis, floribus in bracteorum subspatulatorum tarde deciduorum axillis oppositis; calycibus florentibus fere glabris 2,5—3 mm longis, in maturitate labia inferiore 4—4,5 mm longa, gibba 3—4 mm alta; corollarum caerulearum tubo 11—12 mm longo; nuculis atropurpureis, verrucosis, 1,5 mm diametro.

Colombia: Norte de Santander: In valle fluminis Pamplonita inter Pamplonita et Chinacota in collibus apertis, 1300—1800 m, 17. III. 1927, Killip et Smith 20751; Santander: in valle fluminis Lebrija prope Bucaramanga, 400—700 m, 29. XII. 1926, Killip et Smith 16313.

4. **S. purpurascens** Sw., Prodr. Veg. Ind. Occ. 89, 1788. — (?) *S. malvaefolia* Kunth l. c. 2, 324, 1817. — *S. Felisberti* Nees et Martius in Nov. Act. Nat. Cur. 11, 77, 1823. — (?) *Perilomia*

malvaefolia Briq. in Engler u. Prantl. Nat. Pflanzenfam., ed. 1, IV, 3a, 233, 1897.

Herba perennis debilis in basi frequenter prostrata et radicans caulibus 15—20 cm altis pilis brevissimis extensis puberulis; foliorum laminis nunc rotundatis nunc late ovatis mediis 2—3 cm longis, in apice saepius obtusis rarius acuminatis, in basi rotundato-subcordatis, pagina superiore fere glabra pilis appressis conspersa, inferiore ad venas pilis brevissimis puberula, marginibus convexioribus irregulariter sinuatis petiolis gracilibus 1—2.5 cm longis elatis; racemis maximam partem 4—5 cm longis, floribus nunc oppositis nunc 3—4 in verticillastris in bracteorum 3—4 mm longorum perstatorum axillis dispositis, pedicellis 3—3.5 mm longis elatis; calycibus florentibus 2,5—3 mm longis, extus sparse hirtellis, in maturitate labia inferiore 4,5—5 mm longa, gibba 3,5—4 mm alta; corollarum caerulescentum tubo circiter 8 mm longo, intus ad basim piloso; staminibus ad tubi medium sitis; nuculis papillosis.

Colombia: Prope Balsapamba, 10. VII. 1876, André 4049.

Venezuela: Prope coloniam Tovar, Fendler 871; ad La Victoria, 400 m, 8. IX. 1899, Preuß 1605; prope Caracas ad flumen Cotiza, 800—1200 m, VI. 1918, Pittier 7873, 7199; prope Caracas, 2.—7.VII.1874, Kuntze 1225; prope Caracas, Funck 302.

5. **S. breviflora** Benth., Lab. Gen. et Sp. 427, 1834.

Herba perennis altitudine 20—40 cm radicibus sat crassis fasciculatis caulibus ramosis pilis brevissimis extensis puberulis; foliorum laminis sat tenuibus 2,5—6 cm longis, 1,5—3.5 cm latis, late ovatis, praesertim supremis acutis vel leniter acuminatis, in basi rotundato-truncatis etiam subcuneatis, vix cordatis, marginibus sinuato-dentatis, pagina superiore pilis appressis sparse conspersa fere glabra, inferiore ad venas brevissime puberula petiolis 8—20 mm longis elatis; racemis maximam partem 5 ad 10 cm longis, floribus saepius suboppositis frequenter tribus in verticillastris rarius solitariis, bracteis spatulatis persistentibus 2—4 mm longis subtentis, pedicellis 3—4 mm longis elatis; calycibus florentibus 2—2,5 mm longis, extus sparse hirtellis, in maturitate labia inferiore 5 mm longa, gibba circiter 4 mm alta; corollarum violescentum tubo gracile 10—12 mm longo, intus hirtello; nuculis atris vix 1,5 mm diametro, acute mammilosis.

Venezuela: In andibus Trujillo et Merida, Linden 490; Moritz 737; in prov. Lara ad Barquisimeto, Funck et Schlim 773; Moritz 989; in prov. Caracas prope Galipan, VII. 1843,

Funck 737. — Colombia: Magdalena: Ad ripas saxosas fluminis prope Muica, 600 m, 6. VIII. 1898, H. H. Smith 1372; Santander del Norte; Ocana, Engels; Cundinamarca: ad Bogota prope La Mesa, 700—1300 m, Triana; inter Fusagasuga et Pandi, 1000—3000 m, 30. XI. 1917, Pennell 2745; prope Cundinamarca, 2400—2700 m, 7.—8. IX. 1917. Pennell 1892; Valle del Cauca: Boqueran del Dagua, 400—1000 m, Lehmann 5829; El Cauca: circa El Patico ad flumen Paez, Lehmann 6093. — Ecuador: Prope Manabi, Eggers 15599.

6. **S. coccinea** Kunth l. c. 2, 325, 1817.

Herba perennis altitudine ad 50 cm radicibus incrassatis fasciculatis, caulibus in basi saepe decumbentibus, superne crispule hirtellis: foliorum laminis atro-viridibus nunc ovatis nunc ellipticis. mediis 4—10 cm longis, 2—4,5 cm latis, in basi frequenter rotundatis maximam partem rotundato-angustatis, in apice acutiusculis, margine nunc subintegra nunc leniter sinuato-dentata, pagina superiore glabra. inferiore ad venas minutissime hirtella, saepe purpurea. petiolis 1—2,5 cm longis elatis; racemis 3—6 cm longis, floribus confertis, in bracteorum lineari-lanceolatorum perstatorum, axillis irregulariter dispositis, pedicellis 3—4 mm longis elatis; calycibus florentibus 3 mm longis, extus fere glabris, in maturitate labia inferiore 4,5 mm longa, gibba 4 mm alta; corollarum coccinearum tubo 18—20 mm longo, extus sparse glanduloso-hirtello, superne gradatim ampliato; nuculis maturis non visis verisimiliter verrucosis.

Colombia: Tolima: In sylvis prope Libano. 1000—1200 m. 26.—29. XII. 1917, Pennell 3418; Cauca: ad Rio Risaralda. 1600—2000 m, 20. X. 1883, Lehmann 3315; in sylvis ad flumen Paila prope Corinto, 1400 m, I. 1906, Pittier 1010; in sylvis Patcho, XII. 1846. Purdie; in andibus centralibus Popayan, 1300—1800 m, XII. 1882. Lehmann 4221; prope Narangal, 1800—2000 m, XI. 1883. Lehmann 3315.

7. **S. albo-rosea** Lemaire in Illus. Hortic. 16, pl. 584. 1869.

Herba perennis altitudine ad 40 cm radicibus incrassatis fasciculatis, caulibus simplicibus sat dense glanduloso-puberulis; foliorum laminis 6—12 cm longis, 3—5 cm latis, saepius oblongo-ovatis, in apice breviter leniterque acuminatis in basi rotundatis maximam partem leniter cordatis nullomodo cuneatis, marginibus sat convexis, sinuatis. interdum subintegris, ut videtur undulatis, pagina superiore glabra. inferiore praesertim ad venas puberula, petiolis 1,5—2,5 cm longis elatis; racemis 5—12 cm longis, floribus confertis in bracteorum deciduorum lineari-lanceo-

latorum 4—5 mm longorum axillis irregulariter dispositis; calycibus florentibus 2,5 mm longis extus brevissime hirtellis, in maturitate labia inferiore 5 mm longa, gibba 5—6 mm alta; corollarum tubo 17—18 mm longo sat gracile superne abrupte dilato; nuculis non visis.

The specimens here cited correspond closely to Lemaire's figure. There is some ambiguity about the color, the corollas of the original description apparently being white beneath, purple rosy above; Lehmann describes them as „dunkle Kermesinroth"; as nearly as the color may be ascertained from dried specimens they appear pale rather than deeply colored; André describes then as being rosy.

Ecuador: In sylvis umbrosis andium Sigsig ad cursum fluminis Gualaquiza prope confluentem Bombaiza, 600—1000 m, Lehmann 5830; Palanda, 21. XII. 1876, André 4630; Quebrada de Zambanama, 24. X. 1875, André 4630.

8. **S. Lehmanni** Regel in Gartenflora 33. 129. pl. 1152, 1884.

Herba perennis altitudine 40—60 cm caulibus subsimplicibus pilis glandulosis extensis cinereis irrasis, internodiis mediis 5 ad 10 cm longis; foliorum laminis late ovatis, 4,5—8 cm longis, 3,5—6 cm latis, in apice acutis, breviter acuminatis, in basi rotundatis interdum subcordatis, marginibus infra medium valde convexis, sinuato-dentatis, dentibus parvis acutiusculis sparsis, pagina superiore atroviride brevissime hirtella, inferiore molliter cinereo-pubescente, petiolis 8—20 mm longis elatis; racemis 3 ad 8 cm longis glanduloso-irrasis, floribus sat confertis in bracteorum lanceolatorum deciduorum axillis irregulariter dispositis; calycibus florentibus 2,5—3 mm longis extus glanduloso-pubescentibus, in maturitate labia inferiore 4 mm longa, gibba 4—4,5 mm alta; corollarum coccinearum tubo gradatim ampliato 10—12 mm longo; nuculis maturis non visis.

Colombia: Tolima: Prope Dolores, 1300—1700 m, Lehmann; prope Dolores, 1500—1700 m, Lehmann 7866; sine loco, Lehmann 2338; inter Carnicerias et Iquira, 800—1500 m, Lehmann 6044; in Alto del Gaucho, sur de Ate, 25. VIII. 1926. Woronow 7006.

9. **S. Ventenatii** Hook. in Bot. Mag. 72, pl. 4271, 1846. — *S. scarlatina* Planch. et Lind. ex Lemaire in L'Illus. Hortic. 3, pl. 104, 1856.

Herba perennis speciosa pulchra altitudine 60—100 cm caulibus debilibus superne sat ramosis, pilis brevibus extensis saepe purpurascentibus cinereis; foliorum laminis late ovatis, mediis 4—8 cm longis, 3,5—6 cm latis, in apice nunc obtusiusculis nunc breviter acuminatis, in basi saepius cordatis, marginibus praesertim infra medium convexioribus subintegris, pagina superiore pilis brevibus sparse molliterque pubescente et glandulis sessilibus lucidis conspersa, inferiore pallidiore subincana pilis longioribus molliter hirsuta, petiolis 1—3,5 cm longis elatis; racemis demum elongatis 10—25 cm longis irrasis et sparse glandulosis; floribus sat confertis in bracteorum 2—3 mm longorum deciduorum axillis suboppositis; calycibus florentibus 2,5—3 mm longis extus glanduloso-pubescentibus, in maturitate labia inferiore 5—6 mm longa, gibba circiter 5 mm alta; corollarum pulchre coccinearum tubo 18—20 mm longo gradatim dilato; nuculis atris regulariter tuberculosis.

Venezuela: Trujillo, Funck et Schlim 772. — Colombia: Cundinamarca: Prope Santa Fe de Bogota, Goudot; Triana; Tracy; prope Susumuco ad Quetame, 1100—1300 m, 5. IX. 1917, Pennell 1724; prope Fusagasuga, 23. XII. 1852, Holton 489; inter Fusagasuga et Pandi, 1000—2000 m, 30. XI. 1917, Pennell 2752; in sylvis prope Bandi, 1800—2000 m, 1.—3. XII. 1917, Pennell 2823; El Cauca: prope Tulua, 22. IX. 1853, Holton; ad ripas fluminis Dabio, 1500—1800 m, 8. XI. 1883, Lehmann 3293.

10. **S. Trianae** Planch. et Lind. in Belg. Hortic. 6, 232, 1856. — *S. amarantina* Planch. et Lind. e Galeotti in Journ. Hort. Prac., ser. 2. 217, 1858.

Herba ascendens interdum subscandens altitudine 50—60 cm et ultra, caulibus pilis extensis cinereo-puberulis; foliorum laminis mediis 3—6 cm longis 1,5—3,5 cm latis, ovatis, leniter acuminatis, in basi rotundatis, nullomodo cordatis, marginibus sat convexis, dentato-serratis, pagina superiore atro-viride fere glabra, pilis brevissimis conspersis, inferiore cinereo-pubescente, petiolis gracilibus 8—20 mm longis elatis racemis demum elongatis 15 ad 20 cm longis, glanduloso-irrasis; floribus in bracteorum lineari-lanceolatorum saepius perstatorum axillis irregulariter dispositis, pedicellis 3—5 mm longis elatis; calycibus florentibus 2,5—3 mm longis, glanduloso-puberulis, in maturitate labia inferiore 5 mm longa, gibba circiter 5 mm alta; corollarum coccineo-purpurearum tubo gradatim ampliato, 18—22 mm longo; nuculis non visis.

Colombia: Cundinamarca: Bogota, ad Mesa Grande in andibus orientalibus, 1200—1600 m, 10. VII. 1897, Lehmann

8813; inter Quetame et Susumoco, 1400 m, Pennell 1350; prope Quetame 1600 m, André 983; Tolima: Mariquita, prope Piedras, 400 m, Triana 2031; El Cauca: Popayan: Patia. 25. IV. 1876, André 2927; in andibus Popayan, 1700—1800 m. Lehmann 7865; prope Almaguer, 2800 m, Triana; ad Rio Ortega prope Tambo, 2000—2100 m, ad rivuli ripas, 2. VII. 1922, Pennell et Killip 8048; prope San Antonio, 2100—2500 m, 27. VI. 1922, Pennell et Killip 7282; prope Canitas, André 2740; ad Rio Palace, André 2740; Popayan, in cultis, Lehmann 6143.

11. **S. incarnata** Vent., Choix des Pl. 39, 1803.

Herba altitudine 30—50 cm caulibus superne frequenter ramosis cinereo-pubescentibus; foliorum laminis 2,5—5 cm longis, anguste ovatis, interdum ellipticis, in apice acutis, ad basim angustato-rotundatis, interdum subcuneatis, marginibus convexioribus leniter dentato-serratis frequenter subintegris, pagina superiore atro-viride, hirtella, inferiore cinereo-pubescente, interdum purpurca, petiolis 8—20 mm longis elatis, racemis demum elongatis, 10—20 cm longis, glanduloso-pubescentibus; floribus in bracteorum lanceolatorum mox deciduorum axillis irregulariter dispositis, pedicellis 2—4 mm longis elatis; calycibus florentibus 3 mm longis, extus glanduloso-hirtellis, in maturitate labia inferiore 5 mm longa, gibba 4—4,5 mm alta; corollarum coccinearum tubo gradatim ampliato 17—20 mm longo; nuculis atris circiter 1 mm diametro, tuberculosis.

Venezuela: Trujillo: Ad Pavo, Funck et Schlim 772; in collibus Miraflores prope Palmira, cordillera centrale, 1600—1700 m, I. 1906, Pittier 906. — Colombia: Valle del Cauca: Prope Buga, 1000 m, Triana 2032; Cundinamarca: prope Bogota, Umana; prope Tena, 1300 m, Triana 2028; in cordillera de Bogota, Triana; prope Cachipay, Tracy; prope San Francisco, Barroblanco prope Fusagasuga, 4. II. 1876, André K. 465; Tolima: prope San Lorenzo in collibus ad El Covenio, 29.—30. XII. 1917, Pennell 3500; Huila: in sylvis prope Neiva in cordillera orientale, 1.—8. IX. 1917, Rusby et Pennell 587; prope Neiva, 800 ad 1000 m, 31. VII. 1917, Rusby et Pennell 422; El Cauca: ad Rio Piendamo prope Popayan, 1650—1750 m. 12. VII. 1922, Pennell et Killip 8285; in valle Rio Pala, 1800 m, I. 1906, Pittier 1040; Popayan: prope Patia, Lehmann B. T. 1089; Popayan, 1700—1800 m, Lehmann 7865; Narino: inter El Tablon et Pasto, 2000—2200 m, Lehmann 6174.

12. **S. Lindeniana** Benth. in DC., Prodr. 12, 421, 1848.

Herba suffruticosa diffusa verisimiliter alteris effulta caulibus gracilibus superne pilis extensis puberulis; foliorum laminis 3—5 cm

longis, 1,5—2 cm latis, ellipticis, utrimque subaequaliter angustatis, in apice acutis, in basi interdum obtusis, petiolis 5—10 mm longis elatis, pagina superiore glabra, inferiore ad venas minutissime puberula, marginibus subintegris; racemis 5—10 cm longis, floribus suboppositis, pedicellis 3—5 mm longis elatis, in bracteorum ovato-lanceolatorum tarde deciduorum axillis dispositis: calycibus florentibus 4—4,5 mm longis extus glanduloso-hirtellis, in maturitate labia inferiore 6—7 mm longa, gibba circiter 6 mm alta: corollarum ut videtur coccinearum tubo superne gradatim ampliato, circiter 25 mm longo, faucibus circiter 5 mm diametro; nuculis maturis non visis.

Venezuela: In andibus Trujillo et Merida, Linden 467; in andibus Merida, in locis subalpinis humidis umbrosis, Moritz 988.

13. **S. cyanocheila** Epl. in Fedde, Rep. Beih. 85, 176, 1936. Herba perennis altitudine ad 60 cm caulibus ramosioribus ramis pilis brevibus extensis irrasis vestitis, internodiis elongatis 3—12 cm longis; foliorum laminis mollibus ellipticis 2—5 cm longis, 1—2 cm latis, in apice acutis, in basi angustatis, petiolis 3—12 mm longis elatis, margine subintegra leniter serrata, paginis ambobus breviter pubescentibus; floribus in spicas breves 2—5 cm longas congestis, in maturitate verticillastris inter se 3—5 mm distantibus bracteis deciduis parvis subtentis; calycibus florentibus 3 mm longis extus pilis brevibus extensis sparse vestitis, in maturitate 5 mm longis, pedicellis irrasis 4—6 mm longis elatis; corollarum tubo roseo 15—16 mm longo, labia inferiore caerulea; nuculis non visis.

Colombia: Antioquia: Ad Pinguru et Toyo supra Antioquia; 1300—1600 m, Lehmann 7868; prope Buritica, 5000 m, in apricis, 4. VII. 1880, Kahlbreyer 1748.

14. **S. roseo-cyanea** Epl. in Fedde, Rep. Beih. 85, 176, 1936. Herba perennis altitudine ad 1 m et ultra caulibus pilis extensis glandulosis molliter vestitis; foliorum laminis mollibus 4—12 cm longis 3—10 cm latis, cordatis (? interdum rotundatis) in apice breviter acuminatis, margine sinuato-dentata, pagina superiore sparse hirsuta, inferiore pallidiore molliter pubescente, petiolis 2—6 cm longis elatis; racemis demum ad 30 cm elongatis, floribus suboppositis vel tribus et quatuor in bracteorum deciduorum ovatorum 3—4 mm latorum axillis dispositis, pedicellis 3—4 mm longis elatis; calycibus florentibus, 4 mm longis extus hirsutis, in maturitate labia inferiore 6 mm longa, gibba 5—6 mm alta; corollarum tubo superne gradatim ampliato 20—25 mm longo roseo, labia inferiore cyanea; nuculis papillosis.

Colombia: Antioquia: Prope Buritica in locis apertis, 1500 m, 1879, Kahlbreyer 1746; ? prope Dabeiba, 300—800 m, in andibus occidentalibus, Lehmann 4734; ? in andibus Santa Rosa in silvis inter Hoyo-rico et Saraneta, 2400—2600 m, XII. 1891, Lehmann 7265.

15. **S. elliptica** Epl. in Fedde, Rep. Beih. 85, 177, 1936.

Herba suffruticosa ut videtur caulibus ascendentibus simplicibus elongatis, internodiis 3—8 cm longis, pilis crispulis pubescentibus; foliorum laminis subcoriaceis ellipticis 5—7 cm longis, 1,5—2 cm latis acutiusculis, utrimque subaequaliter angustatis, subintegris, pagina superiore glabra, inferiore ad venas brevissime hirtella, petiolis 4—6 mm longis elatis; racemis sat elongatis crispule pubescentibus, floribus confertis in bracteorum lineari-oblongorum perstatorum axillis irregulariter dispositis; calycibus florentibus 4,5—5 mm longis, breviter hirtellis, in maturitate non visis, pedicellis 2—3 mm longis elatis; corollarum coccinearum tubo in basi attenuato superne gradatim ampliato 35 mm longo; nuculis maturis non visis.

Colombia: Tolima: Prope Santa Ana, 1500 m, 8. I. 1883. Lehmann 2348.

16. **S. atriplicifolia** Benth. in Bot. Reg. sub pl. 1493, 1832. — *S. Hartwegii* Benth., Plantae Hartweg. 244, 1846.

Herba perennis radicibus fasciculatis incrassatis caulibus superne crispule puberulis interdum pilis glandulosis extensis vestitis; foliorum laminis late ovatis, 4—9 cm longis, 2,5—5 cm latis, in apice leniter acuminatis interdum obtusiusculis, in basi rotundatis, marginibus sat convexis, sinuato-subserratis interdum integris, pagina superiore glabra rarius sparse hirtella, inferiore ad venas brevissime hirtella, frequenter purpurea, petiolis 1—3 cm longis elatis; racemis 5—10 cm longis, brevissime hirtellis, floribus in bractcorum lanceolatorum saepe perstatorum axillis suboppositis; calycibus florentibus 2,5—3 mm longis extus hirtellis, in maturitate labia inferiore 3,5 —4 mm longa, gibba circiter 4,5 mm alta, pedicellis 4—6 mm longis elatis; corollarum rubropurpurearum tubo 18—22 mm longo, superne gradatim ampliato; nuculis maturis non visis.

Ecuador: In andibus Quitensibus, Jameson 537; in declivitate occidentale andium Quitensium, 2600 m, Hartweg 1342.

17. **S. ocymoides** Epl. in Fedde, Rep. Beih. 85, 178, 1936. — *Perilomia ocymoides* Kunth in Humboldt et Bonpland, Voy., Nov.

Gen. et Sp. Pl. 2, 328, 1817. — *P. Weberbaueri* Mansf. in Notizbl. Bot. Gart. Berlin-Dahlem 9, 285, 1925.

Suffrutex pulcher verisimiliter diffusus ramulis gracilibus marginatis hirtellis purpureis; foliorum laminis mediis 3—4 cm longis, ovatis vel rotundato-ovatis, breviter acuminatis, in basi rotundatis, marginibus convexioribus serrato-crenatis, pagina superiore glabra, inferiore ad venas hirtella, petiolis gracilibus 5—8 mm longis elatis; floribus in racemis paniculatis instructis, in foliorum deminutorum integrorum axillis oppositis, pedicellis 1—2 mm longis elatis; calycibus florentibus purpureis 3,5—4 mm longis extus hirtellis, in maturitate labiis subaequaliter concavis 6—7 mm longis; corollarum coccinearum extus hirsutarum tubo 12—14 mm longo recurvo-ascendente, intus ad staminum bases pubescente; filamentis supra tubi basim circiter 5 mm sitis, infra medium pilosis; nuculis angulatis, angulis lacerato-dentatis.

Colombia: Cundinamarca: Bogota: Prope Caguega. 2000 m. Triana. — Ecuador: In plantie Quitensis. Hall: prope Alausi. Bonpland 3232.

18. **S. Perilomia** Epl. in Fedde, Rep. Beih. 85, 178. 1936. — *Perilomia scutellarioides* Kunth l. c. 2. 327. 1817.

Suffrutex pulcher altitudine ad 3 m subvolubilis ramulis gracilibus purpureis hirtellis, angulis marginatis: foliorum laminis mediis 3—4 cm longis, ovatis vel rotundato-ovatis, breviter acuminatis, in basi rotundatis, marginibus convexioribus serrato-crenatis, pagina superiore glabra, inferiore ad venas hirtella, petiolis gracilibus 8—12 mm longis elatis; floribus in racemis paniculatis instructis, in foliorum abrupte deminutorum integrorum axillis oppositis, pedicellis 2—3 mm longis elatis; calycibus florentibus purpureis 3—3,5 mm longis, extus hirtellis, in maturitate labiis subaequaliter concavis, 5,5—6 mm longis; corollarum coccinearum extus hirsutarum tubo 7—8 mm longo, recurvo-ascendente intus ad staminum bases pubescente; filamentis supra tubi basim 3 mm sitis, infra medium pilosis: nuculis angulatis. angulis lacerato-dentatis.

Colombia: Cundinamarca: Bogota: Circa Ubola. 2000 m. VIII. 1855. Triana. — Ecuador: In andibus quitensibus, 2600 m, Jameson 145: prope Cumbe. 24. IX. 1918, Rose 22960; in andibus occidentalibus Cuenca, prope Molleluro et Huasi-huaico. 2500—3200 m. Lehmann 6483: prope Guaranda. 8. VII. 1876. André 3932; prope Guaranda, 3000 m, Spruce 6225; sine loco, Lobb.

19. **S. volubilis** Kunth l. c. 2, 325, 1817. — *S. cumanensis* Kunth l. c. — *Perilomia volubilis* Briq. in Engl. u. Prantl, Nat. Pflanzenfam., ed. 1, IV, 3a, 233, 1897. — *P. cumanensis* Briq. l. c. — *P. Briquetiana* Mansf. in Notizbl. Bot. Gart. Berlin-Dahlem 9, 284, 1925. — *P. palamblaensis* Mansf. l. c.

Suffrutex altitudine ad 1 m ramulis pilis extensis vestitis. internodiis mediis 2—5 cm longis; foliorum laminis 1,5—3 cm longis, rugosis, rotundato-ovatis vel ovatis, in apice nunc rotundatis nunc obtusis, in basi vel rotundato-truncatis vel truncato-cuneatis, petiolis 6—12 mm longis elatis, marginibus crenatis, pagina superiore sparse hirtella, inferiore densiore pallidiore interdum subtomentosa, pilis tamen rectis nec crispis vestitis; floribus ad ramulos laterales 2—3 cm longos instructis, in foliorum deminutorum axillis oppositis; calycibus florentibus 2,5—3 mm longis, extus pilis extensis hirsutis, gibba obscura dorsaliter ornatis, in maturitate 3,5—4,5 mm longis, labiis ambobus concavis, subaequalibus. superiore leniter compresso-conica, nullomodo in scutellum producta, pedicellis 2,5—3 mm longis elatis; corollarum coccinearum tubo 15—18 mm longo. extus hirsuto, intus inter staminum anticorum basis areola dense pilosa ornato. filamentis glabris, posticis ad tubi medium sitis et longe decurrentibus. anticis supra tubi basim circiter 4 mm sitis; nuculis papillosis.

I question the stated locality of *S. cumanensis* and believe rather that the plant came from Ecuador. *P. palamblaensis* and *P. Briquetiana* are assuredly conspecific, and, other than expected differences in habit, I can find little to distinguish them from the plants of Ecuador.

Ecuador: Prope Loja, VIII. 1867, Seemann 716; prope Ona, Jameson 137; in silva San Lucas prope Loja, 2500—2700 m, Lehmann 4953; prope Loja, André K 1566; prope Loja, Lobb; prope Loja, Bonpland 3326; prope Loja, 29. IX.—3. X. 1918, Rose 23281, 23894.

20. **S. sarmentosa** Epl. in Fedde, Rep. Beih. 85, 180, 1936.

Suffrutex sarmentosus altitudine ad 4 m ramulis gracilibus floccoso-villosis, pilis ramosis flavidis, internodiis 3—6 cm longis; foliorum laminis ovatis, 2—3 cm longis, 12—18 mm latis, obtusis, in basi ad petiolos 5—8 mm longos floccoso-villosos cuneato-angustatis, pagina superiore subglabra, inferiore floccoso-villosa, venis prominulis, floribus solitariis in foliorum deminutorum axillis in racemis brevibus 2—3 cm longis instructis; calycibus florentibus 7 mm longis extus floccoso-villosis, ore subtruncato. labiis vix 1 mm longis, gibba subnulla, in maturitate

non visis; corollarum purpurearum tubo 35 mm longo, arcuato, superne gradatim ampliato, intus ad staminum posticorum bases areola dense villosa ornato, labiis 5 mm longis subaequilongis; staminibus anticis circiter 12 mm posticis circiter 6 mm supra tubi basim sitis, omnibus breviter exsertis; nuculis non visis.

Ecuador: In declivitate occidentale montis Chimborazo, 3000 m, Spruce.

Ocimum.

Ocimum L., Hort. Cliff. 315, 1737 et in Sp. Pl. 597, 1753.

Herbae nunc annuae nunc perennes caudice lignoso tuberoso; foliis variis: floribus tribus in bracteorum saepe caducorum axillis pedicellis ascendento-recurvis elatis in racemis saepe paniculatis dispositis; calycibus bilabiatis, dente supremo subrotundo latissimo ad tubum plus minusve decurrente, in maturitate saepe concavo et ascendenti-recurvo, lateralibus minoribus abrupte acuminatis, anticis longioribus acuminato-setaceis, ascendenti-incurvo, frequenter tubum clausis, interdum fere ad apices connatis, tubo ovato intus ad basim frequenter hirsuto-annulato, venis 10; corollis bilabiatis, laciniis posticis quatuor subaequalibus connatis antica subrotunda vel plana vel leniter concava patente; staminibus posticis ambobus ad tubi basim sitis, frequenter denticulo appendiculatis, anticis longioribus infra laciniam anticam sitis, omnibus declinato-recurvis; stylo flexuoso exserto, ramis planis acutis; gynobasis columella subnulla; nuculis obovatis frequenter pelliculo madefactis obtectis.

Stamina postica ad bases denticulo appendiculata
Corollae 7—8 mm longae; calycum tubi extus hirtelli vel hispiduli . . . . *O. Basilicum*
Corollae 3,5—4 mm longae; calycum tubi extus praesertim ad basim pilis longioribus rigidis ornati . . . . *O. americanum*
Stamina nuda; corollae 3—4 mm longae
Calycum dens supremus ad tubi basim decurrens *O. micranthum*
Calycum dens supremus breviter decurrens . *O. sanctum*

1. O. Basilicum L., Sp. Pl. 597, 1753.

Herba aromatica annua ramosa varia altitudine 40—60 cm fere glabra ramis quadratis sulcatis hirtellis hispidulisve, internodiis 2—3 cm longis; foliorum laminis 3—4 cm longis, 1—2 cm latis, ovatis ovato-lanceolatisve, leniter acuminatis, in basi rotundatis, margine fere integra, utrimque glabris vel praecipue ad basim sparse pilosis, petiolis gracilibus 1—1,5 cm longis elatis;

floribus tribus in verticillastris confertis praecipue in maturitate deflexis, glomerulis inter se circiter 1 cm distantibus. bracteis reflexis hispido-ciliatis 4—6 mm longis in basi angustatis persistentibus subtentis, pedicellis erecto-recurvis 2,5—3 mm longis elatis: calycibus florentibus campanulatis 4 mm longis, dente supremo rotundato-cordato ad basim decurrente, lateralibus ovatis obtusis mucronatis, infimis pungentibus laterales superantibus. calycibus maturis auctis reticulato-venosis hispido-ciliatis, dente supremo concavo 5 mm diametro, infimis 2,5 mm longis incurvis in basi deltoideis; corollis 7—8 mm longis, lacinia inferiore circiter 4 mm longa, tubo intus nudo; staminibus corollam paulo superantibus, posticorum filamentis in basi denticulo appendiculatis; nuculis circiter 2 mm longis.

Frequens ex hortis disseminatur etiam ut videtur sponte crescit. Specimina e Venezuela et Colombia vidi. Forma dubia deminuta ramosior a Pittier (no. 6183) prope Caracas, a Burchell (no. 6994—3) ad oppidum Goyaz et a Puttemans in civitate São Paulo in Serra da Cantareira lecta verisimiliter ad *O. minimum* L. (speciem dubiam) referri potest.

2. **O. americanum** L. in Amoen. Acad. 4, 276, 1755. — *O. canum* et *stamineum* Sims in Bot. Mag. **51**, t. 2452, 1824.

Herba annua ramosa odoratissima altitudine ad 40 cm cinerea ramis crispule pubescentibus, internodiis 1—4 cm longis; foliorum laminis pallidis, 1,5—3 cm longis, 6—15 mm latis, oblongo-ellipticis, utrimque maximam partem obtusis, margine integra, paginis ambobus sparse hirtellis, petiolis gracilibus 5 ad 10 mm longis plus minusve hispidis; floribus tribus in verticillastris confertis, bracteis persistentibus 3—4 mm longis hispidis in basi attenuatis subtentis, pedicellis erecto-recurvis 2—2,5 mm longis elatis, glomerulis inter se 5—10 mm distantibus; calycibus florentibus 3 mm longis intus extus hispido-pilosis, in maturitate 4—4,5 mm longis, dente supremo complanato-rotundo concavo ad basim decurrente, lateralibus 1—1,5 mm longis, infimis 1,5—2 mm longis lanceolato-subulatis: corollis 3,5 mm longis, laciniis superioribus brevibus aequalibus, inferiore 1,5—2 mm longa; staminibus corollam paulo superantibus, posticis ad basim denticulo appendiculatis, anticis in laciniae inferioris basi sitis: nuculis 1,5 mm longis.

Colombia: In fruticetis prope Turbaco, Bolivar. 6.—22. XI. 1926, Killip et Smith 14687.

3. **O. micranthum** Willd., Enum. Hort. Berol. 630, 1809.

Herba erecta altitudine 20—100 cm varia ramosa ramis cymoso-divaricatis glabris; foliorum laminis 2,5—7 cm longis,

plerumque circiter 4 cm longis, saepius ovatis, in apice acutis vel gradatim acuminatis, in basi rotundato-angustatis, utrimque glabris, margine subintegra, petiolis gracilibus 1—2 cm longis elatis; floribus tribus in verticillastris laxis inter se 0,5—1,5 cm distantibus dispositis, bracteis ovatis acuminatis sessilibus deciduis subtentis; calycibus florentibus 2.5 mm longis, pedicellis circiter 3 mm longis elatis, in maturitate dente supremo concavo ad basim decurrente 7—8 mm longo in basi truncato, infimis pungentibus quam laterales duplo longioribus incurvis; corollis 3—4 mm longis; staminibus corollam subaequantibus glabris nullomodo appendiculatis; nuculis circiter 2 mm longis madefactis pelliculo obtectis.

Venezuela: Prope Caracas, 1829, Vargas 95; prope Sacupana, IV. 1896, Rusby et Squires 66; ad coloniam Tovar, Fendler 872; inter Puerto Cabello et Valencia in umbrosis, 20—100 m, 21. X. 1919, Pittier 8630; prope Cristobal Colon, 1923, Broadway 37.

Colombia: Prope La Paila, IV. 1853, Holton 25; prope Guarumi (Magdalena), 11. X. 1871, André 502; Santa Marta, 80 m. H. H. Smith 564; in valle Magdalena prope lacum Sapotoza, VII. 1924, Allan 159; prope Quebrada Sabencta, Antioquia, 1160 m. 19.—20. IX. 1922, Pennell 10810; prope Paso de Caramante, Antioquia, 600—700 m, 20. IX. 1922, Pennell 10829; prope Dagua, El Valle, 700—900 m. 14. V. 1922, Pennell 5647; prope Gerardor, Cundinamarca, 19. VII. 1917, Rusby et Pennell 119.

Coleus Lour.

1. **C. Blumei** Benth., Lab. Gen. et Sp. 56, 1832.

May be expected as an escape.

2. **C. atropurpureus** Benth. in Wall. Pl. As. Rar. 2, 16, 1831.

Recently collected by Archer (no. 1795) in Colombia: Intendencia del Chaco: Quibdo, Rio Atrato. Through the courtery of Sir Arthur Hill this specimen was determined for me at Kew.

Marsypianthes.

Marsypianthes Martius ex Benth., Lab. Gen. et Sp. 64, 1833 et in DC., Prodr. **12**, 84, 1848.

Herbae vel prostratae vel erectae saepius viscidae foliis sat parvis, ovatis ellipticisve; floribus maximam partem in capitulis laxis rarius solitariis semper in foliorum supremorum axillis raro subspicato dispositis; calycibus turbinato-campanulatis, dentibus quinque aequalibus deltoideo-lanceolatis, post anthesin conniventibus, in maturitate erecto-patentibus, faucibus intus nudis; corolla-

rum tubo recto cylindrato, calycis dentes subaequante, labia superiore bifida, inferiore trifida, laciniis lateralibus medium alte saccatum superantibus; staminibus quatuor, filamentis liberis edentulis vel glabris vel pubescentibus, posticis quam antici brevioribus, omnibus in faucibus sitis; stylo in apice breviter bifido, ramis subcomplanatis; nuculis hemisphaericis, ventraliter concavo-cymbiformibus, margine membranacea valde involuta fimbriata laceratave; gynobasis columella erecta quadrata truncata.

1. **M. Chamaedrys** Kuntze, Rev. Gen. 524, 1891. — *Clinopodium Chamaedrys* Vahl, Symb. 3, 77, 1794. — *M. hyptoides* Martius ex Benth. l. c. 64, 1832 et l. c. 12, 84, 1848. — *M. viscosa* Klotzsch in Schomb., Fl. Br. Guian. 1148, 1848 (nomen). — *Hyptis Chamaedrys* Willd., Sp. Pl. 385, 1800. — *H. pseudochamaedrys* Poit. in Ann. Mus. Par. 7, 469, t. 31, f. 1, 1806. — *H. inflata* et *lurida* Spreng., Syst. Veg. 2, 731. 1825. — *M. hyptoides* var. *bracteosa*, *umbrosa*, *eriocephala* et *arenosa* Benth. in DC., Prodr. 12, 85, 1848.

Herba annua procumbens raro erecta caulibus paucis ascendentibus rarius glabris maximam partem glanduloso-villosis etiam viscidis et sordidis, internodiis longitudine variis; foliorum laminis maximam partem ovatis et in apice obtusis, in basi nunc subtruncatis nunc cuneato-angustatis, interdum subcordatis, 1,5—7 cm longis, 0,8—3,5 cm latis, in petiolos saepius 0,8—1,5 cm longos graciles angustatis, marginibus sat convexis crenato-serratis, paginis ambobus sparse villosis, plerumque plus minusve viscidis; capitulis hemisphericis nunc fere sessilibus nunc pedunculis 1 ad 3 cm longis elatis, bracteis lineari-lanceolatis raro anguste ovatis villosis calyces subaequantibus subtentis; calycibus florentibus 4—5 mm longis, dentibus deltoideo-ovatis acuminatis 1,5—4 mm longis, in maturitate tubo late turbinato 3—5 mm longo sat tenue, dentibus conniventibus demum patentibus villosis; corollarum tubo 4—6 mm longo; nuculis 1,5 mm longis.

A species of considerable variability, the variants of which seemingly have no correlated distribution. *M. hyptoides* var. *bracteosa* Benth. is unique in the ovate bracts. I have seen no other specimens comparable. *M. hyptoides* var. *umbrosa* Benth. is a large leaved form in which the calyx teeth are often long-acuminate; it passes into *M. hyptoides* var. *eriocephala* Benth. in which the calyx teeth are long acuminate and very woolly, but in which the leaves are smaller. *M. hyptoides* var. *arenosa* Benth. is a viscid form with small leaves, often thickish, the heads being short-peduncled, the whole plant often sordid with particles of earth or sand which cling to it. Two of these variants may often grow in the same locality. To what extent the differences are

environmental and to what extent racial is too complex a question to determine from herbarium specimens. Due, therefore, to the lack of geographical correlation and the instability of the proposed variations I have considered it wisest to leave their study to those who may study them in the field.

Per Americam calidiorem usque ad Peruviam, Boliviam orientalem et Paraguay in campis sparse silvestris, in umbrosis, in paludibus, in arenosis, ad vias, in apricis, in campis, in glareosis, in dumetis, in pascuis, ad rivulos late disseminata est.

Eriope.

Eriope Kunth ex Benth., Lab. Gen. et Sp. 142, 1833 et in DC., Prodr. **12**, 140. 1848.

Frutices suffrutices vel herbae perennes e caudice lignoso caulibus saepius pilis brevibus vestitis et longioribus rigidis extensis conspersis; foliis variis maximam partem ovatis nunc glabris nunc velutinis, rarius filiformibus: floribus solitariis, oppositis, bracteis minutis caducis subtentis, pedicellis gracilibus brevibus extensis in maturitate reflexis elatis, nunc in racemis nunc in paniculis dispositis, nullomodo in cymulis nec in capitulis congestis; calycum florentium tubo breve campanulato, extus appresso-hirtello, ore intus hirsuto-annulato, dentibus brevibus late deltoideo-ovatis posticis tribus subconjunctis, in maturitate tubo nunc campanulato nunc turbinato costato-venuloso et superne reticulato, ore pilis densis albis clauso, dentibus tribus posticis omnino conjunctis auctis planis reflexo-patentibus, anticis duobus erectis vix auctis; corollarum tubo maximam partem campanulato amplo interdum ventricoso, ad basim constricto; labia superiore ampla breviter bifida ascendente, inferiore trifida, lacinia media saccata abrupte dejecta et ad basim in rugam transversam coarctata; staminibus quatuor declinatis, posticis duobus brevioribus pilosioribus gracilioribus decurrentibus saepius e tubo exsertis, anticis ad fauces sitis, omnium antheris subreniformibus similibus loculis confluentibus; stylo exserto, in apice breviter bifido, glabro; gynobasis columella (*E. stricta* excepta) elongata nuculas superante; nuculis ovato-complanatis (*E. stricta* excepta) laevibus, in maturitate ut videtur madefactis pelliculo obtectis.

1. **E. crassipes** Benth. l. c. 144, 1833 et l. c. **12**, 142. 1848. — *E. nudiflora* Kunth ex Benth. l. c. 144, 1833 et l. c. **12**, 142, 1848.— *E. crassipes* var. *acutifolia* Benth. l. c. 144, 1833; var. *parvifolia* Benth. in DC., Prodr. **12**, 142, 1848; var. *macrophylla* Benth. l. c. **12**, 142, 1848. — *E. chamaedrifolia* (nomen) Taubert ex Glaziou in Mém. Soc. Bot. Fr., Mém. **3**, 556, 1911.

Herba perennis habitu varia caulibus paucis e caudice tuberoso lignoso interdum grande ascendentibus, altitudine ad 50 cm, pilis brevibus nunc crispulis nunc extensis vestitis et longioribus rigidioribus praesertim ad bases conspersis; foliorum laminis coriaceis, maximam partem 4—6 cm longis, rarius 2 cm, interdum 8 cm longis, maximam partem 12—25 mm latis interdum 40 mm latis, nunc ovatis nunc oblongo-lanceolatis, in apice plerumque obtusis rarius acutis, in basi nunc rotundatis nunc angustatis rarissime lenissime cordatis, petiolis 2—10 mm longis elatis, marginibus sat convexis serrulatis, juvencum paginis ambobus pilis rigidis conspersis, in maturitate glabris venulosis subnitidis; floribus nunc in racemis solis nunc in paniculis pauciramosis, pedicellis gracilibus 2—3 mm longis elatis, bracteis lanceolatis 1—2 mm longis caducis subtentis; calycum florentium tubo 1—1,5 mm longo extus hirtello, dentibus deltoideis, in maturitate tubo campanulato 3—5 mm longo dentibus tribus conjunctis circiter 2 mm longis, ascendentibus, anticis erectis; corollarum tubo 3,5—6 mm longo; nuculis circiter 2,5 mm longis, ovato-complanatis.

Colombia: Prope Santa Marta, Goudot; ad Apiaci Tiramena, 1856, Triana.

Venezuela: In arenosis prope Maypures, Bonpland 898; prope Maypures, VI. 1864, Spruce 3618.

Hyptis.

Hyptis Jacq. (nomen conservandum) Coll. 1, 101. 1786. — *Mesosphaerum* P. Br., Hist. Jamaic. 257, t. 18, f. 3. 1756. — *Brotera* Spreng. in Trans. Linn. Soc. 6, 151, t. 12, 1802. — *Hypothronia* Schrank in Syll. Ratisb. 1, 85, 1824. — *Hippothronia* Benth., Lab. Gen. et Sp. 130, 1833 (nomen). — *Gnoteris* Raf., Sylva Tellur. 76, 1838. — *Siagonarrhen* Mart. ex J. A. Schmidt in Mart., Flora Brasil. 8, 146, 1856 (nomen). — *Schaueria* Hassk. in Flora 25, II. Beibl., 25, 1842.

Plantae habitu valde variae nunc herbae pusillae caducae annuae nunc arbores maximam partem herbae perennes suffruticosae; foliis forma et magnitudine variis; floribus plerumque in capitulis frequenter in cymulis densioribus vel verticillastris congestis rarius oppositis et in paniculis diffusis dispositis; calycibus plerumque 10-venis, tubo florente saepius turbinato in maturitate aucto cylindrato saepius recto frequenter ad fauces abrupte recurvo-deflexo intus nudo vel ad medium piloso-annulato sectionis *Apodotium* inter dentes antices ad medium fisso, dentibus subaequalibus postico rarius majore erectis nunc longe setaceis nunc

subulatis frequenter deltoideo-ovatis rarius hamatis etiam sectionis *Cyanocephalarum* clavatis etiam sectionis *Polydesmiarum* interdum nullis in maturitate vix auctis; corollarum tubo nunc gracile cylindrato nunc anguste infundibuliforme intus nudo. labia superiore emarginata suberecta, inferioris laciniis lateralibus ut videtur deflexis media valde saccata in basi ruga transversa finito; staminibus quatuor didymis ad labiam inferiorem declinatis; styli glabri ramis aequilongis nunc planis extensis nunc brevissimis in clavellam adjunctis; gynobasis columella nunc subnulla nunc elongata ovula superante nuculas aequante; nuculis nunc laevibus nunc asperulis frequenter foveolatis frequenter complanatis, in apice rotundatis vel truncatis interdum emarginatis frequenter apiculatis, angulis rarius marginatis.

Hyptides venezuelanae.

Flores oppositi in paniculis diffusis dispositi . *H. Salzmanni*

Flores in cymulis densis vel capitulis congesti

- Calycum tubi inter dentes antices ad medium fissi, stoma itaque valde obliquum; herbae annuae habitu *H. brevipedis* . . . . *H. pulegioides*
- Calycum stoma nullomodo obliquum
  - Flores in cymulis nunc subglobosis nunc pectinatis bracteis lineari-setaceis inconspicuis subtentis dispositi
    - Cymuli subsessiles in paniculas saepe densas congesti
      - Calycum tubi 5—7 mm longi . . . . . *H. suaveolens*
      - Calycum tubi 1,5—4,5 mm longi
        - Cymuli pectinati paniculati . . . . . *H. pectinata*
        - Cymuli dense spicati . . . . *H. spicigera*
    - Cymuli globosi pedunculis gracilibus 1—3 cm longis elati
      - Calycum dentes 0,5—1 mm longi; foliorum pili simplices . . . . *H. sidaefolia*
      - Calycum dentes 1—1,5 mm longi; foliorum pili ramosi . . . . *H. Purdiaei*

Flores in capitulis bracteis ovato-ellipticis vel lanceolatis rarius subulatis subtentis dispositi

- Calycum tubi ad fauces deflexi
  - Folia plerumque 8—15 mm longa . . . . *H. microphylla*
  - Folia plerumque 3—9 cm longa . . . . . *H. recurvata*

Calycum tubi recti nullomodo flexuosi
- Gynobasis columella ovula superans nuculas subaequans; nuculae verrucosae vel foveolatae
  - Folia oblonga 6—14 mm lata sessilia in basi truncata . . . . *H. dilatata*
  - Folia ovata vel elliptica nec sessilia saepius latiora
    - Capitula in foliorum axillis sessilia . . . *H. hirsuta*
    - Capitula in foliorum axillis pedunculata
      - Planta prostrata . . . . *H. atrorubens*
      - Plantae erectae procerae
        - Folia ovata in basi rotundata . . . . *H. brachiata*
        - Folia rotundata in basi cordata . . . *H. fulva*
- Gynobasis columella pyramidali-truncata quam ovula brevior; nuculae laeves
  - Capitula numerosa in paniculis plus minusve congestis disposita; bractea erecta cupuliforma
    - Bractea 3—4 mm longa; calycum dentes 0,8—1,2 mm longi . . . . *H. mutabilis*
    - Bractea 4—8 mm longa; calycum dentes 1—1,5 mm longi . . . . *H. colombiana*
  - Capitula in foliorum plus minusve deminutorum axillis disposita; bractea lanceolata vel subulata patentia in maturitate reflexa
    - Calycum tubi ad medium intus extus piloso-annulati
      - Herbae diffusae caulibus paucis e caudice lignoso surrectis . . . . . . *H. lantanaefolia*
      - Herbae erectae sat procerae
        - Calycum dentes 2,5—4 mm longi . *H. conferta*
        - Calycum dentes 1,5 mm longi . . . *H. capitata*
    - Calycum tubi nullomodo annulati
      - Calycum dentes deltoidei obtusi . . . *H. Parkeri*
      - Calycum dentes subulati acuti
        - Capitula matura 15—20 mm diametro *H. sinuata*
        - Capitula matura 10—15 mm diametro *H. brevipes*

Hyptides colombianae.

Folia pinnatisecta . . . . *H. laciniata*
Folia integra vel serrata
  Arbores floribus in cymulis laxis calycum dentibus deltoideis . . . . *H. arborea*
  Frutices vel herbae perennes floribus in cymulis densioribus vel capitulis dispositis; calycum dentes subulati vel setacei rarius ovati
    Calycum tubus ad apicem abrupte deflexus . *H. recurvata*
    Calycum tubus rectus
      Flores in cymulis nunc laxioribus pectinatis nunc densioribus globosis frequenter binis ternisve in foliorum axillis pedunculis gracilibus elatis, bracteis parvis setaceis subtentis
        Calycum maturorum tubi 5—7 mm longi *H. suaveolens*
        Calycum maturorum tubi 1—4,5 mm longi
          Rami foliaque pilis ramosis vestita . . *H. Purdiaei*
          Rami foliaque pilis simplicibus vestita vel glabra
            Cymuli in foliorum vix deminutorum axillis dispositi (vidi *H. pulegioides*) *H. melissoides*
            Cymuli in foliorum deminutorum axillis dispositi nunc paniculati nunc spicati
              Cymulorum pedunculi quam calyces maturi vix longiores etiam subnulli
                Cymuli in spicas cylindratas densas congesti . . . . *H. spicigera*
                Cymuli in paniculis ramosis congestis dispositi . . . . *H. pectinata*
              Cymulorum pedunculi quam calyces maturi duplo triplove longiores et ultra; panicula diffusa
                Cymuli maturi scorpioideo-pectinati in paniculis diffusissimis dispositi *H. diffusa*
                Cymuli maturi subglobosi bini ternive in foliorum axillis dispositi
                  Folia subtus molliter pubescentia plus minusve incana
                    Folia in apice rotundata; calycum dentes 1—1,5 mm longi *H. obtusata*
                    Folia in apice acuta vel obtusa; calycum dentes 0,3—0,8 mm longi . . . . *H. sidaefolia*

Folia subtus praesertim ad venas villosa utrimque viridia . . . *H. silvestris*

Flores in capitulis vel verticillastris bracteis modo ovato-lanceolatis modo subulatis saepius conspicuis appressis subtentis rarius parvis occultis

Herba annua bractea inconspicua; calycum tubi inter dentes duos antices fere ad medium fissi, stoma itaque valde obliquum . *H. pulegioides*

Herba perennes; calycum stoma nullomodo obliquum; verticillastra globosa sessilia in foliorum deminutorum axillis disposita; calycum dentes deltoideo-ovati . . . . . . *H. verticillata*

Capitula pedunculata; calycum dentes subulati rarius deltoideo-ovati

Folia sessilia oblonga in basi truncata 5 ad 14 mm lata; capitula compacta molliter villosa . . . . *H. dilatata*

Folia saepius petiolata ovata rarius elliptica 8—25 mm lata et ultra

Calycum tubi ad medium intus extus villoso-annulati

Herba ramosa caulibus pluribus e caudice lignoso decumbentibus frequenter radicantibus foliis plerumque 2,5 ad 3,5 cm longis . . . . *H. lantanaefolia*

Herbae erectae procerae foliis longioribus

Calycum dentes 1,5 mm longi . . . *H. capitata*

Calycum dentes 2,5—5 mm longi

Bractea ubique cinereo-puberula, capitula matura hemisphaerica . . . *H. conferta*

Bractea glabra; capitula matura globosa . . . . *H. savannarum*

Calycum tubi intus glabrati nullomodo villoso-annulati

Nuculae foveolatae; gynobasis columella ovula superans

Herba prostrata; capitula in foliorum axillis disposita . . . . . *H. atrorubens*

Herbae suffruticosae erectae; capitula in paniculis disposita

Folia rotundata in basi plus minusve cordata . . . . *H. fulva*

Folia ovata in basi rotundata . . *H. brachiata*

Nuculae laeves; gynobasis columella pyramidali-truncata quam ovula brevior

Calycum dentes deltoidei obtusi. tubi maturi 1,5 mm longi urceolati . *H. obtusiflora*

Calycum dentes lanceolati vel subulati acuti, tubi maturi 2—8 mm longi

Verticillastra bracteis elliptico-ovatis erecto-appressis subtentis

Bractea 3—4 mm longa; calycum tubi maturi saepius 4, rarius 6 mm longi . . . . *H. mutabilis*

Bractea 4—8 mm longa; calycum tubi maturi 6—8 mm longi . *H. colombiana*

Verticillastra bracteis subulatis extensis demum reflexis subtentis

Calycum tubi maturi 4—7 mm longi . . . . *H. sinuata*

Calycum tubi maturi 2—3,5 mm longi

Folia imprimis elliptico-lanceolata in basi attenuata; calycum dentes gracillimi acutissimi . . . . *H. brevipes*

Folia imprimis in basi rotundata: calycum dentes acuti subconniventes . . . . . . *H. personata*

Hyptides aequatorenses.

Calycum dentes deltoideo-ovati obtusi conniventes . . . . *H. obtusiflora*

Calycum dentes setacei vel subulati erecti

Calycum tubus ad apicem abrupte deflexus . *H. recurvata*

Calycum tubus rectus

Flores in cymulis nunc laxioribus pectinatis nunc densioribus globosis in foliorum axillis frequenter binis ternisve pedunculis gracilibus elatis, bracteis parvis setaceis inconspicuis subtentis (*H. spicigerae* in spicas cylindratas congesti)

Calycum maturorum tubi 5—7 mm longi . *H. suaveolens*

Calycum maturorum tubi 1—4.5 mm longi
Foliorum laminae 5—10 mm longae . . *H. gymnocaulos*
Foliorum laminae plerumque 3—10 cm longi
Ramulorum et foliorum pili ramosi
Ramulosum et foliorum pili simplices
Cymuli in foliorum supremorum vix deminutorum axillis dispositi . . . *H. diversifolia*
Cymuli in foliorum deminutorum vel bracteorum axillis dispositi maximam partem panicula ampla facientes rarius in spicas densas congesti
Cymulorum pedunculi quam calyces maturi vix longiores etiam nulli; cymuli itaque sessiles et saepius in spicas conferti
Calycum tubus maturus 3,5—4,5 mm longus; cymuli spicati
Corollarum tubus 2,5 mm longus *H. spicigera*
Corollarum tubus 3,5—4,5 mm longus . . . . *H. argutifolia*
Calycum tubus maturus 2—2,5 mm longus; cymuli pectinati . . . *H. pectinata*
Cymulorum pedunculi quam calyces maturi duplo triplove longiores et ultra; cymuli maturi globosi inter se magnam partem 1—5 cm distantes, panicula itaque diffusa
Caules superne minute puberuli; pruinoso-pseudoglauci; folia sessilia . . . . *H. pseudoglauca*
Caules villosuli vel pilosi; folia petiolata
Calycum dentes maximam partem 1—1.5 etiam 2 mm longi saepius purpurei; calyces extus villosi
Folia in apice rotundata; calyces extus lanati . . . . *H. obtusata*
Folia in apice acuta . . . . . *H. lachnosphaeria*
Calycum dentes maximam partem minus quam 1 mm longi
Calycum os dense et molliter villosa et tubi lanati . . *H. pilosa*
Calycum os hirsuta et tubi villosuli subglabri . . . . *H. sidaefolia*

Flores in capitulis saepius hemisphaericis et echinatis bracteis conspicuis ellipticis vel subulatis subtentis (in spicas cylindratas congesti *H. spicigerae*)
  Herba prostrata nuculis asperulis bracteis ellipticis . . . . *H. atrorubens*
  Herbae erectae (*H. lantanaefolia* procumbens) nuculis laevibus bracteis subulatis vel lanceolatis in maturitate reflexis (ellipticis erectis *H. mutabilis*)
    Capitula parva paniculata bracteis ellipticis erectis subtentis (vide etiam *H. colombianam*) . . . . *H. mutabilis*
    Capitula 15—30 mm diametro echinata
      Folia plerumque 2—3 cm longa subsessilia: plantae procumbentes . . . . *H. lantanaefolia*
      Folia 4—12 cm longa petiolata: plantae erectae
        Calycum dentes 1—2 mm longi
          Caules superne ubique appresso-hirtelli rarius omnino glabri; folia ovata in basi plus minusve rotundata . . . *H. capitata*
          Caules superne solum ad angulos villosi rarius glabri: folia rhomboidea in basi cuneata angustata . . . . *H. rhomboidea*
        Calycum dentes 3—4 mm longi (vide etiam *H. savannarum*) . . . . *H. florida*

1. **H. arborea** Benth. in DC., Prodr. 12, 132, 1848. — *Mesosphaerum arboreum* Kuntze, Rev. Gen. 2, 526, 1891 (nomen). — *M. arboreum* var. *bracteosum* Rusby in Mem. Torr. Bot. Cl. 6, 107, 1896. — *H. arborea* subsp. *guianensis* et *bracteosa* Briq. in Ann. Conserve. et Jard. Bot. Genève 2, 199, 1898.

Frutex vel arbor pulcher pyramidalis ramosa altitudine ad 15 m diametro 10 cm et ultra, cortice 4—5 mm crassitudine rugoso ut videtur cinereo; ramulis fere teretibus asperis rufofloccosis, internodiis 2—6 cm longis; foliorum laminis 8—20 cm longis, 3,5—7 cm latis, saepius ellipticis rarius in basi rotundatis, margine obscure crenulata, pagina superiore nitidula asperrima, inferiore dense rufo-tomentella, petiolis floccosis 1—3 cm longis elatis, ramulorum fertilium foliis deminutis frequenter obovatis, saepius in matura utrimque argenteis; floribus in cymulis laxis ramosis bracteis sublinearibus incanis 4—5 mm longis subtentis, in foliorum saepius argenteorum deminutorum axillis pedunculis

1,5—4 cm longis dispositis paniculas erectas foliosas facientibus; calycibus extus floccoso-tomentosis incanis, florentibus 5 ad 7 mm longis, dentibus deltoideis acuminatis 2—2,5 mm longis, leniter obliquo, in maturitate tubo 6—8 mm longo; corollarum caerulearum tubo 10—11 mm longo; staminum filamentis villosis in fauce sitis: gynobasis columella quam ovula longiore; nuculis complanatis, 4 mm longis, 1,5 mm latis, ala membranacea in apice nunc truncata nunc retusa cinctis.

Colombia: Antioquia: Prope Buena Vista, 23. XII. 1879, Kahlbreyer 1288; inter Yolombo et Cancan, IX. 1884, Lehmann 196.

2. **H. Salzmanni** Benth., Lab. Gen. et Sp. 138, 1833 et in DC., Prodr. **12**, 137, 1848. — *H. Salzmanni* var. *filipes* Benth. in DC. l. c. 137, 1848. — *Mesosphaerum Salzmanni* Kuntze, Rev. Gen. **2**, 527, 1891 (nomen).

Herba perennis ut videtur altitudine ad 2 m ramis gracilibus saepius dense pilosis, internodiis 1—3 cm longis: foliorum laminis 1,5—2,5 cm longis, 8—12 mm latis, deltoideo-ovatis, obtusis, in basi rotundatis, margine irregulariter crenata, pagina superiore breviter hirsuta et pilis paucis conspersa glandulosa, inferiore cinerea subtomentosa, petiolis 3—8 mm longis elatis; floribus in paniculis glabris glaucis, internodiis 5—10 cm longis, ramis inferioribus saepe foliosis, bracteis ovato-lanceolatis saepius hirtellis 2—3 mm longis subtentis, pedicellis gracillimis 0,5—3 cm longis glabris elatis: calycibus extus hirtellis, florentibus 2,5 mm longis, dentibus deltoideo-lanceolatis acutis, in maturitate tubo globoso-campanulato, 4 mm longo, dentibus 1—1,5 mm longis; corollarum tubo 5—6 mm longo: nuculis 2,7 mm longis.

Venezuela: Cumana in Cerro de l'Impossible, 800 m, VIII. 1843, Funck 715; ad oppidum Bolivar, 4.—25. XI. 1929, Holt et Gehriger 148; sine loco 1846, Moritz 419.

3. **H. verticillata** Jacq., Icones Rar. **1**, t. 113, 1781—1786 et in Coll. **1**, 101, 1786. — *Stachys patens* Sw., Prodr. Veg., Ind. Occ. 88, 1786. — *Mesosphaerum verticillatum* Kuntze, Rev. Gen. **2**, 525, 1891 (nomen).

Herba perennis vel suffrutex altitudine nunc 0,5—1 m nunc 2—3 m et ultra; ramis gracilibus acute quadratis appresso-puberulis, internodiis 3—4 cm longis: foliorum laminis lanceolatis oblongo-lanceolatisve, 3—6 cm longis, acutiusculis, in basi angustatis vix tamen cuneatis, margine serrata rarius integra, paginis ambobus puberulis glabriusculis, petiolis 5—8 mm longis

in basi incrassato-articulatis elatis vel supremis sessilibus; floribus 5—20 et ultra in cymulis densis, saepius sessilibus dispositis, bracteis brevibus setaceis subtentis, glomerulis subglobosis confertis, maturis saepe 8 mm diametro, inter se 0,5—1,5 cm distantibus, spicas interruptas formantibus et in paniculis instructis; calycum florentium tubo 1 mm longo extus glabriusculo, venis subcostatis et leniter undulatis, dentibus circiter 0,7 mm longis deltoideo-ovatis acutis herbaceis, in maturitate tubo circiter 2 mm longo distento, dentibus circiter 1 mm longis conniventibus, pedicellis vix 1 mm longis elatis; corollis albis rarius pallide violaceis 3 mm longis, tubo 2 mm longo; nuculis oblongis 1,3 mm longis in apice rotundato-truncatis fuscis minute reticulatis et madefactis pelliculo obtectis.

Colombia: Magdalena: Prope Santa Marta, H. H. Smith 1364; Bolivar: prope Morales ad flumen Sinu 5. II. 1918, Pennell 4163; Antioquia: prope Quebrada Sabaneta, Valparaiso, 800 ad 1100 m, 19.—20. IX. 1922, Pennell 10808; Santander: Barranca Bermeja, 90—95 m, 28. IX. 1922, Pennell 10994; Caldas: in dumetis prope San José, 1400—1800 m. 3. IX. 1922, Pennell 10250; El Valle: prope Pavas, 1500—1600 m. 22. V. 1922, Pennell 5938; Huila: ad Matagaima, 12. VIII. 1917. Rusby et Pennell 1160.

4. **H. pectinata** Poit. in Ann. Mus. Par. 7, 474, t. 30, 1806. — *Nepeta pectinata* L., Syst. ed. 10, 1096, 1759. — *Brotera persica* Spreng. in Trans. Linn. Soc. 6, 151, t. 12, 1802. — *Hyptis nepetoides* Fisch. ex Schrank in Denkschr. Bot. Ges. Regensb. 2, 52. 1822. — *Mesosphaerum pectinatum* Kuntze, Nev. Gen. 2, 525, 1891 (nomen).

Herba perennis altitudine 1—3 m caulibus in basi duris ramis ramulisque pubescentibus saepe scabris; foliorum laminis forma et magnitudine variabilibus, 2—7 cm longis et ultra, maximam partem ovatis, vel acutis vel acuminatis, in basi rotundatis etiam subcordatis, pagina superiore nunc tenuiter nunc dense hirtella rarius hirsuta, inferiore pallidiore, nunc puberula nunc canotomentosa, margine crenato-serrata, petiolis 1—3 cm longis elatis; cymulis laxis pectinatis furcatis, bracteis lineari-setaceis 1—4 mm longis subtentis, pedunculis 1—2 mm longis in maturitate plus minusve deflexis elatis; calycum florentium tubo vix 1 mm longo, dentibus 1—1,5 mm longis erectis setaceis strictis, ore truncato erecto-hispido, in maturitate tubo 1,5—2,5 mm longo cinereo-hispidulo, ore leniter constricto; corollarum tubo 1,5 mm longo; nuculis fere 1 mm longis, atris.

Per Americam calidiorem late disseminata est.

5. **H. diffusa** Epl. in Fedde, Rep. Beih. **85**, 242, 1936.

Herba erecta caulibus villosulis pilosisque, internodiis 3 ad 8 cm longis; foliorum laminis viridibus membranaceis, 8 ad 15 cm longis 5—9 cm latis, deltoideo-ovatis, acutis, in basi subtruncato-cordatis, margine supra medium fere recta, acute duplicato-dentata, crenis primis 1—3 mm altis, secondariis 8—12 mm altis, pagina superiore sparse hirtella, inferiore pallidiore molliter incano-villosula, petiolis villosis 5—8 cm longis; cymulis ramosis laxis pedunculis gracillimis hirtellis 1—2 cm longis elatis in paniculis amplissimis tenuissimis dispositis; calycibus florentibus 2,5 mm longis extus hirtellis, dentibus vix 1 mm longis, in maturitate tubo 3 mm longo, ore erecto-hirsuto, pedicellis 1 mm longis elatis; corollarum tubo 3 mm longo; nuculis 1,2 mm longis.

Colombia: Magdalena: Prope Santa Marta, H. H. Smith 1373.

6. **H. spicigera** Lam., Encycl. 3. 185, 1789. — *Nepeta americana* Aubl., Hist. Pl. Guiane Fr. 2, 623, 1775. — *Hyptis lophantha* Mart. ex Benth., Lab. Gen. et Sp. 78. 1833. — *H. Pohliana* Jacq. e Benth.. Lab. Gen. et Sp. 140, 1833 (nomen). — *H. subverticillata* Anderss. in Vet. Akad. Hand. Stockh. p. 197, 1855. — *H. menthodora* Schrank ex J. A. Schmidt in Mart., Fl. Bras. 8, 84, 1858 (nomen). — *H. gonocephala* Wright ex Griseb., Cat. Pl. Cub. 212, 1866. — *Mesosphaerum gonocephalum*, *M. lophanthum*, *M. subverticillatum*, *M. menthodorum* et *M. spicigerum* Kuntze, Rev. Gen. 2, 526, 527, 1891 (nomina). — *H. americana* Urb. in Fedde, Rep. **25**, 322, 1918 (non Briq. in Engler u. Prantl, Natürl. Pflanzenf., ed. 1, IV, 3a, 338, 1897).

Herba foetida annua altitudine ad 1 m et ultra caulibus superne sat ramosis sulcatis puberulis et glandulosis ad angulos scabris; foliorum laminis maximam partem 4—6 cm longis, anguste ovatis, in apice vel acutis vel acuminatis, in basi ad petiolos 1—3 cm longos abrupte cuneato-angustatis, marginibus subdupliciter serratis, paginis ambobus praesertim ad venas sparse puberulis fere glabris; floribus in verticillastris sessilibus confertis in spicas cylindratas densas 2—6 cm longas congestis, in maturitate ad 1,5 cm diametro; calycum florentium tubo turbinato 1—1,5 mm longo, dentibus erectis setaceis 1,5—2 mm longis, in maturitate tubo 4,5 mm longo; corollarum tubo 2 mm longo; nuculis 1,2 mm longis minutissime punctato-rugosis.

Venezuela: Bucarito 1893—1894, Mocquerys. — Ecuador: Guayas: Inter Guayaquil et Salinas, VI. 1923, Hitchcock

20048. — Galapagos: Albemarle, Anderson 119; Albemarle, Stewart 3325; James Island, IV. 1899, Snodgrass et Heller 356.

7. **H. argutifolia** Epl. in Fedde, Rep. Beih. 85, 245, 1936.

Herba ut videtur caulibus obtuse quadratis, hirsuto-villosis, internodiis supremis 5—8 cm longis; foliorum supremorum laminis 2,5—4 cm longis, 1,5—3 cm latis, ovatis, leniter acuminatis, in basi cordatis, margine acute serrata subpannosa, pagina superiore hirsuto-villosa, inferiore albo-tomentosa, venis reticulatis prominulis, petiolis ad 1 cm longis elatis; cymulis ramosis nunc solitariis nunc binis pedunculis villosis 5—6 mm longis elatis in spicis paniculatis congestis; calycibus florentibus 3 mm longis extus villosis, dentibus 1 mm longis, ore pilis ornatis, in maturitate tubo 4 mm longo; corollarum tubo 3,5 mm longo; nuculis 1,5 mm longis.

Ecuador: Prope Yangana, André 4592.

8. **H. suaveolens** Poit. in Ann. Mus. Par. 7, 472, t. 29, f. 2, 1806. — *Ballota suaveolens* L., Syst. ed. 10. 1100. 1759 et Pl. Jam. Pugill. 15, 1759. — *H. Plumieri* Poit. in Ann. Mus. Par. 7, 473, 1806. — *Schaueria graveolens* Hassk. in Flora 25, II, Beibl. 25, 1842. — *Mesosphaerum suaveolens* Kuntze, Rev. Gen. 2, 526, 1891 (nomen). — *H. congesta* Leonard in Journ. Wash. Acad. Sci. 17, 70, 1927.

Herba annua habitu valde varia altitudine 0,5—3 m caulibus obtuse quadratis fistulosis canaliculatis glanduloso-villosis et praecipue ad basim hirsuto-pilosis, internodiis quam folia nunc brevioribus nunc longioribus; foliis 3—10 cm longis, ovatis, maximam partem acutis, in basi nunc rotundatis nunc leniter cordatis, margine convexiore, saepius serrata, frequenter duplicato- et sinuato-serrata, pannosa, rarius subintegra, utrimque saepius villosulis et praecipue ad venas plus minusve hirsutis, rarius subglabris, petiolis laminarum dimidia parte brevioribus, rarius laminas aequantibus, maximam partem hirsutis; floribus saepius 3—5 in cymis sat densis dispositis, pedunculis calyces matures subaequantibus elatis, cymis rarius in bracteorum axillis solitariis itaque racemam gracilem formantibus, frequenter in foliorum immutatorum axillis solitariis vel subfasciculatis sitis, saepius in racemis brevibus congestis in foliorum supremorum deminutatorum axillis instructis, nodis nunc sat remotis nunc coufertis et praecipue ad ramulorum apices spicas densas formantibus; calycibus florentibus 4—5 mm longis, extus nunc villosis nunc praecipue ad basim hirsuto-pilosis, dentibus subulatis in basi dilatis, tubum aequantibus ore oblique truncato erecto-hispido, in

maturitate tubo 5—7 mm longo leniter bilabiato paulo declinato, dentibus vix mutatis rigidis acutissimis subpatentibus; corollis saepius caeruleis interdum purpureis, tubo 4—6 mm longo subventricoso; nuculis 2.5—4 mm longis nunc atris nunc fuscis compressis in apice truncatis et emarginatis madefactis pelliculo obtectis.

Per Americam calidiorem late disseminata est.

9. **H. melissoides** Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. Pl. **2**. 320, 1817. — *Mesosphaerum melissoides* Kuntze, Rev. Gen. **2**, 526, 1891 (nomen).

Frutex aromaticus altitudine ad 2 m ramosus foliosus, ramis obtuse quadratis subteretibus sat crassis sparse villosulis, internodiis 1—3 cm longis; foliorum laminis 2,5—4 cm longis, 1—3 cm latis maximam partem ovatis et in basi rotundatis frequenter tamen oblongo-ellipticis utrimque obtusis in apice semper obtusis, margine irregulariter crenato-serrata, pagina superiore viride hirsuta, inferiore albo-tomentosa, petiolis 3—10 mm longis elatis; cymulis ramosis maximam partem binis in foliorum axillis pedunculis gracillimis 1—2 cm longis elatis, floribus inter se 1 ad 2 mm distantibus; calycibus florentibus 2,5 mm longis extus hirtellis, dentibus 0,7 mm longis, ore pilis brevibus ornatis, in maturitate tubo 3,5 mm longo tubuloso-campanulato, dentibus subpatentibus; corollarum tubo 5 mm longo; nuculis 1.5 mm longis.

Colombia: Cauca: Rio Juanambu, 28. IV. 1876. André 2897; Rio Juanambu, 1500—2000 m, Lehmann 4673; prope pagum El Tablon et ripam fluminis Juanambu, 1500—2000 m, in locis alsis amoenis, Bonpland 2129; sine loco, 1300 m, Triana.

10. **H. diversifolia** Benth., Plant. Hartweg. 144, 1844 et in DC., Prodr. **12**, 126, 1848. — *Mesosphaerum diversifolium* Kuntze, Rev. Gen. **2**, 526, 1891 (nomen).

Frutex altitudine ad 1 m et ultra ramis sat crassis dense tomentosis, internodiis 1—2 cm longis; foliorum ramorum sterilium laminis 3,5—5 cm longis, 3—4 cm latis, subrotundis, obtusis, in basi leniter cordatis, petiolis crassis 8—15 mm longis elatis, ramorum fertilium eis saepe 1,5—2 cm longis, ovatis, utrimque obtusis, fere sessilibus, omnibus molliter coriaceis, pagina superiore hirtella, inferiore petiolisque dense tomentella, margine obscure crenulata; cymulis ramosis pedunculis villosis 1—1,5 cm longis in foliorum reductorum axillis elatis; calycibus florentibus 4 mm longis extus dense villosis, ore pilis ornatis dentibus 1 mm

longis; in maturitate tubo 4—4,5 mm longo; corollarum tubo 3,5—4 mm longo: nuculis maturis non visis.

Ecuador: El Catamayo prope Loja, Hartweg 803.

11. **H. gymnocaulos** Epl. in Fedde, Rep. Beih. 85, 247, 1936.

Suffrutex surculosus diffusus ramis gracilibus strictis saepius divaricatis tenuiter villosulis, internodiis 1—3 cm longis; foliorum laminis 5—7 mm longis, late ovatis, utrimque obtusis, margine crenulata, paginis ambobus villosulis, glandulosis, inferiore pallidiore. petiolis gracilibus laminas subaequantibus elatis; cymulis paucifloris pedunculis gracillimis sparse villosulis 1—3 cm longis. in foliorum axillis instructis; calycibus florentibus 3.5 mm longis extus hirtellis et glandulosis, dentibus 0,7 mm longis, in maturitate tubo 4—4,5 mm longo; corollarum tubo 5 mm longo; nuculis 1,3 mm longis.

Galapagos: Insula Albermarle prope sinu Cowley dicto, 400—700 m, 10. VIII. 1905, Stewart 3326.

12. **H. lachnosphaeria** Epl. in Fedde, Rep. Beih. 85, 247, 1936.

Suffrutex ramis diffusis ad 3 m longitudine obtuse quadratis superne dense molliterque tomentellis incanis, internodiis supremis 5—25 cm longis; foliorum laminis 7—8 cm longis, 4 ad 4.5 cm latis, acutis, in basi rotundatis vix cordatis. pagina superiore viride molliter hirsuta, inferiore albo-tomentosa mollissima, venulis reticulatis, petiolis circiter 1 cm longis tomentosis elatis; cymulis globosis maturis densis 1,5 cm diametro. bracteis paucis linearibus subtentis, pedunculis amplissimis elatis: calycibus florentibus 3.5 mm longis, extus mollissime lanatis nunc albis nunc purpureis. dentibus setaceis 1—2 mm longis, in maturitate paulo auctis, tubo 4.5 mm longo tubuloso-campanulato; corollarum tubo 4 mm longo; nuculis maturis 1,2 mm longis.

Ecuador: Chimborazo: Prope Huigra, 1200 m, VII. 1923, Hitchcock 20365.

13. **H. pilosa** Benth.. Lab. Gen. et Sp. 124, 1833 et in DC., Prodr. 12, 125, 1848. — *H. pilosa* var. *costata* Benth. in DC. l. c. 125, 1848. — *Mesosphaerum pilosum* Kuntze, Rev. Gen. 2, 526, 1891 (nomen).

Herba perennis erecta altitudine ad 1 m caulibus obtuse quadratis ad angulos sparse rigido-pilosis, internodiis supremis 5—8 cm longis. ramulis gracilibus; foliorum laminis 5—10 cm longis, 3—6 cm latis. ovatis. sat tenuibus, leniter acuminatis in basi rotundatis, margine irregulariter crenato-serrata, pagina

superiore viride hirtella, inferiore tomentella, pallidiore, petiolis gracilibus 1—3 cm longis villosis elatis, cymulis globosis diametro 1,5 cm, bracteis subnullis subtentis, pedunculis gracillimis 1 ad 1,5 cm longis villosis elatis in paniculis foliosis saepius dispositis; calycibus florentibus vix 4 mm longis, dentibus acuminatis 0,6 ad 1 mm longis, extus utrimque pilis albis molliter pilosis, in maturitate tubo late cylindrato 4—5 mm longo costato; corollarum tubo 3 mm longo; nuculis 1,2 mm longis.

Ecuador: In puna prope Guayaquil, 1841, Hinds; prov. Guayas inter Guayaquil et Salinas, VI. 1923, Hitchcock 20039.

14. **H. pseudoglauca** Epl. in Fedde, Rep. Beih. 85, 247, 1936.

Herba caulibus obtuse quadratis minute et dense puberulis et pruinoso-glaucis, internodiis 5—8 cm longis; foliis sessilibus sat coriaceis, ut videtur circiter 3 cm longis, obtusis, in basi subcordatis, margine convexiore crenato-serrulata, crenulis vix 1,5 mm altis, pagina superiore hirtella, inferiore albo-tomentosa; cymulis hemisphaericis pedunculis puberulis 1,5—2 cm longis elatis, in paniculis dispositis; calycibus florentibus 2,5 mm longis, dentibus 0,5—0,7 mm longis, in maturitate tubo 3,5 mm longo extus hirtello vix villoso; corollarum tubo 2,5—3 mm longo; nuculis non visis.

Ecuador: Prope San Pedro, 2000 m, 25. XI. 1910, Townsend 107.

15. **H. Purdiaei** Benth. in DC., Prodr. 12. 125. 1848. — *Mesosphaerum Purdiaei* Kuntze, Rev. Gen. 2, 527. 1891 (nomen).

Herba perennis ut videtur caulibus obtuse quadratis, sat crassis, pilis ramosis dense subflocoso-tomentosis, internodiis 5—8 cm longis; foliorum laminis 6—7 cm longis, 4,5 ad 5,5 cm latis, cordatis, leniter acuminatis, margine irregulariter crenato-serrata, pagina superiore breviter hirsuta, viride, venulis leniter impressis, inferiore dense albo-tomentosa; cymulis globosis, diametro 10—12 mm pedunculis villosis 1—2 cm longis elatis, in paniculis amplis ramis extensis dispositis; calycibus florentibus 3 mm longis extus dense villoso-pilosis, dentibus 1 mm longis, in maturitate tubo 3,5 mm longo; corollarum tubo 4 (—? 5) mm longo; nuculis 1,2 mm longis.

Colombia: Magdalena: Ad Rio Hacha, 2000—3000 m, II. 1844, Linden 1626; in Nevada Santa Marta, VII. 1844, Purdie. — Venezuela: San Sebastian prope Caracas, 2000 m. 1843, Funck 288; San Sebastian, 6000 ped., ? Funck 492. —

Ecuador: Imbabura: In Loma de Canaballa, 2100—2300 m, Stübel 147; Chimborazo: Prope Huigra, 6. IX. 1918, Rose 23890; prope Huigra, 2. VIII. 1920, Holway 811.

16. **H. obtusata** Benth., Plant. Hartweg. 241, 1846 et in DC., Prodr. 12, 125, 1848. — *Mesosphaerum obtusatum* Kuntze, Rev. Gen. 2, 526, 1891 (nomen).

Suffrutex altitudine ad 1 m ramis obtuse quadratis sat gracilibus ascendentibus pilis extensis villosis, internodiis 1—8 cm longis; foliorum laminis 1—5 cm longis, 8—35 mm latis, ovatis, utrimque rotundatis vel in apice sat obtusis, margine crenato-serrata, pagina superiore hirsuta, inferiore saepius albo-tomentosa venisque pilis rigidioribus ornatis, petiolis villosis 3—6 mm longis elatis; cymulis hemisphacricis ramosis saepius binis pedunculis villosis 1—2 cm longis in foliorum supremorum reductorum axillis elatis, floribus inter se circiter 1 mm distantibus, bracteis linearibus 2,5—3 mm longis subtentis; calycibus florentibus 3 mm longis extus villosis ore pilis sparse ornato, dentibus 1—1,5 mm longis hispidis, in maturitate tubo 3,5 mm longo tubuloso-campanulato; corollarum tubo 4—4,5 mm longo; nuculis 1,5 mm longis.

Colombia: Narino: Sine loco, Lehmann 6237; in andibus Tuquerres prope Cerro Gualcala, 2300—2800 m, Lehmann 5781; in andibus Tuquerres, 1853, Triana. — Ecuador: Prope Loja, 1918, Rose 23894, 23274; prope Loja, VIII. 1867, Seemann 723; Rio Chola inter Ibarra et Tusa, 1500—2000 m, Lehmann 6237; ad pontem Guapulo prope Quito, 2500 m, Hartweg 1322; ad pagum Guapulo, 2500 m, 5. II. 1920, Holmgren 299; prope Guapulo, 2800 m, 5. XI. 1927, Firmin 240; prope Zorogura, 27. IX. 1918, Rose 23131.

17. **H. silvestris** Epl. in Fedde, Rep. Beih. 85, 249, 1936.

Herbae perennes vel frutices altitudine ad 1 m in basi suffruticosae caulibus pilis extensis sparse hirsutis, internodiis 3—8 cm longis; foliorum laminis anguste ovatis, 4—8 cm longis, 2—4 cm latis, in apice acutis in basi rotundatis rarius subcordatis, paginis ambobus viridibus inferiore praesertim ad venas pilis longioribus hirsuta, margine acute biserrata, petiolis 0,5—3 cm longise latis; cymulis saepius binis ternisve in foliorum supremorum axillis pedunculis villosis gracilibus 2—5 cm longis elatis; calycum florentium tubo 2 mm longo, dentibus vix 1 mm longis, in maturitate tubo 3,5—4 mm longo; corollarum violacearum tubo 3—3,5 mm longo; nuculis ovatis in apice saepe truncatis madefactis pelliculo obtectis.

Colombia: Salanga, XI. 1836, Barclay 648; Anolaima, Lehmann 2508; inter Coconuco et Popayan, 18. VI. 1922, Killip 6893; Galipan, Moritz 1477; Salento, 2100—2500 m, 25.—31. VII. 1922, Pennell et Hazen 8864; inter El Ramel et Rio Sucio, 1600—1900 m, Pennell et Killip 8117; Pavas, 22. V. 1922, Pennell 5937; Libano, 22. XII. 1917, Pennell 3274; in valle Rio Paez ad pagum Huila, 1600—1900 m, I. 1906, Pittier 1228; Fusagasuga, 6. II. 1876, André 1414; Fusagasuga, 18. VI. 1926, Juzepzuk 5276; Medellin, 2000 m, 8. III 1931, Archer 1643, Angelopolis prope Medellin, Toro 276; Servita, Triana 3583.

18. **H. sidaefolia** Briq. in Ann. Conserve. et Jard. Bot. Genève 2, 204, 1898. — *Bystropogon sidaefolius* L'Hérit., Sert. Angl. 19, 1788. — *H. polyantha* Poit. in Ann. Mus. Par. 7. 470, 1806. — *Mesosphaerum polyanthum* Kuntze, Rev. Gen. 2, 526, 1891 (nomen).

Herba aromatica erecta in basi saepe ramosa caulibus obtuse quadratis sparse piloso-villosis sulcatis, internodiis 5—8 cm longis; foliorum laminis 3—5 cm longis, 2,5—4 cm latis, ovatis vix acuminatis, in basi rotundatis vix cordatis, margine irregulariter serrata etiam pannosa, pagina superiore viride molliter hirsuta glabrescente, inferiore undique molliter breviterque villosula etiam incana, petiolis villosis 1—1,5 cm longis elatis; cymulis in maturitate globosis 1 cm diametro, pedunculis villosulis 2—3 cm longis elatis, in paniculis amplis foliosis dispositis; calycibus florentibus violaceis vix 2,5 mm longis extus villosulis, dentibus maximam partem 0,3—0.8 mm longis orum pilis subaequilongis, in maturitate tubo 3.5 mm longo 2 mm diametro; corollarum pallide purpurearum tubo 4 mm longo; nuculis 1,5 mm longis.

H. sidaefolia differs from *H. umbrosa* principally in a combination of several details of habit, particularly in the more rounded, hardly cordate leaves; the differences are slight. However, until further information is at hand I have retained the older name for the Andean plants and *H. umbrosa* for the Brasilian. At the same time *H. eriocephala* does not differ markedly, having somewhat larger calyx teeth, more incanous leaves and more densely pilose stems, all variable characters. I have referred a Guatemalan plant here with some hesitation.

Venezuela: Prope Caracas, 3500 ped., 9. II. 1854, Fendler 880; prope Caracas in silva Catuche dicta, 1000—1200 m, 7. VIII. 1921, Pittier 9653; sine loco, Moritz. — Colombia: Sine loco, Linden 1626; in valle fluminis Magdalena, Goudot. — Ecuador: In andibus sine loco, Spruce 6022; prope Huigra, 2. VIII. 1920,

Holway 811; prope Loja, Hartweg 804; prope Gonzanama, Bonpland 3437; prope Huigra praesertim apud Hacienda de Licay, 6. IX. 1918, Rose 22566; Galapagos: Santa Cruz: inter fruticeta et silvas, 150 m, 18. VIII. 1932, Schimpff 105.

19. **H. colombiana** Epl. in Fedde, Rep. Beih. 85, 257, 1936.

Herbae perennes altitudine ad 1 m ramis pubescentibus rarius subglabris scabris, internodiis superioribus maximam partem 3—8 cm longis; foliorum laminis ovatis, 3—7 cm longis, 2—4 cm (rarius 6 cm) latis, in apice longe acuminatis, supra medium marginibus rectiusculis, in basi rotundato-angustatis, pagina superiore hispidula, inferiore villosula etiam incano-tomentosa, margine crenato-serrata, petiolis 1—3 cm longis elatis; verticillastris in spicas continuas confertis, bracteis purpureis ovato-lanceolatis firmis subrigidis ciliatis maximam partem glabris rare tenuiter villosulis 5—8 mm longis, 1,5—2,5 mm latis acuminatis subtentis, pedunculis 1—2 mm longis elatis; calycibus florentibus 2,5—3 mm longis, dentibus 1—1,5 mm longis setaceis strictis, in maturitate tubo 6—8 mm longo, maximam partem glabro, rarius sparse villosulo; corollarum purpurearum tubo 4—6 mm longo; nuculis 1—1,1 mm longis.

Colombia: Magdalena: Santa Marta, 700 m, IX. 1898—1901, H. H. Smith 1367; Tolima: La Trinidad ad Libano, 1100—1300 m, 21.—25. XII. 1917, Pennell 3338; Cundinamarca: in montibus prope Bogota, André 434; El Cauca: El Saladito prope Cali, 1500 m, 21. XII. 1905, Pittier 760; Santander del Norte: ad Ocana, Linden 248; El Valle: in collibus prope Pavas, 1500—1700 m, 12. V. 1922, Pennell 5472; in collibus inter Potredillo et Miraflores, 1200—1800 m, 27. V. 1922, Pennell 6028; Antioquia: prope Antioquia 1000—1800 m, Lehmann 7870; El Valle: in collibus prope Miraflores ad Palmira, 1000—1200 m, I. 1906, Pittier 908; Caldas: Anserme, 1300—1500 m, 15. IX. 1922, Pennell 10652; El Valle: Pavas, 1500—1700 m, 12. V. 1922, Pennell 5472; Tolima: Mariquita: La Palmilla, Triana; Magdalena: Santa Marta, 2000 ped., H. H. Smith 1490; Santander: prope La Baja, 2200—2600 m, 14.—28. I. 1927, Killip et Smith 1800.

Venezuela: Caracas, Linden 326; prope coloniam Tovar, Fendler 885; Caracas, Funck 435.

20. **H. mutabilis** Briq. in Bull. Herb. Boiss. 4, 788, 1896. — *Nepeta mutabilis* L. C. Rich. in Actes de la Soc. Hist. Rat. de Par. 1. 110, 1792. — *Mesosphaerum mutabile* Kuntze, Rev. Gen. 2, 525, 1891 (nomen).

Herbae annuae (vel perennes?) polymorphae altitudine ad 2 m caulibus erectis ramosis nunc glabris nunc villosis acute quadratis, angulis maximam partem scabris, internodiis mediis 8—10 cm longis; foliorum laminis 3—6 cm longis, 2,5—4 cm latis, maximam partem vel rhomboideo-ovatis vel ovatis, rarius subrotundis etiam reniformibus, in apice breviter leniterque acuminatis, in basi maximam partem vel rotundato-angustatis vel subcuneatis rare subtruncatis etiam late subcordatis, margine irregulariter crenato-serrata, pagina superiore nunc glabra nunc hirtella viride, inferiore nunc praesertim ad venas hirtella rarissime omnino glabra nunc tomentosa canescente, petiolis 1—4 cm longis elatis; floribus nunc 5—7 nunc 20—25 in verticillastris sat densis bracteis elliptico-ovatis in apice brevissime acuminatis 3—4 mm longis saepius ciliatis subtentis, pedunculis 1—4 mm longis gracilibus elatis, glomerulis inter se saepius 1—2 cm distantibus rarius confertis, frequenter diffusioribus; calycibus florentibus 1,5—2 mm longis, extus ad basim saepius villosulis, dentibus 0,8—1,2 mm longis nunc setaceis aequisque nunc subulatis etiam in basi leniter dilatis, quam tubi fructiferi diametros rarius longioribus, in maturitate tubo saepius 4 mm rarius 6 mm longo: corollarum saepius caeruleo-purpurearum tubo 3—4 mm longo; nuculis atris 1—1,2 mm longis oblongis.

Per Americam calidiorem late disseminata est.

var. **spicata** Briq. l. c. 4, 788, 1896. — *H. spicata* Poit. in Ann. Mus. Par. 7, 474, t. 28, f. 2, 1806. — *H. rostrata* Salzm. ex Benth., Lab. Gen. et Sp. 121, 1833. — *H. tenuiflora* Benth. l. c. — *H. spicata* var. *rostrata* Benth. in DC., Prodr. **12**, 122, 1848. — *H. mutabilis* var. *rostrata* Briq. in Engler u. Prantl, Nat. Pflanzenf., ed. 1, IV, 3a, 339, 1897. — *Mesosphaerum spicatum* Rusby in Bull. Torr. Bot. Cl. **27**, 83, 1900. — *H. singularis* Glaziou in Bull. Soc. Bot France 59. Mém., III. 554. 1911 (nomen).

Caulibus nunc glabratis nunc villosis; foliorum pagina inferiore nunc glabra nunc pubescente nec tomentosa; verticillastris pedunculis gracilibus 2—5 mm longis elatis et in paniculis gracilioribus etiam diffusis dispositis; calycum maturorum tubis 4—6 mm longis, dentibus tamen quam tubi diametros vix longioribus.

var. **canescens** Briq. in Bull. Herb. Boiss. 4, 788, 1896. — *H. canescens* Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. 2, 321, 1817. — *H. barbata* Schrank in Denkschr. Bot. Ges. Regensb. 2, 52, 1822. — *H. micrantha* Pohl ex Benth., Lab. Gen. et Sp. 120, 1833. — *H. polystachya* var. *longiflora* Benth., l. c. — *H. spicata* var. *micrantha* Benth. in DC., Prodr. **12**, 122,

1848. — *Mesosphaerum canescens* et *M. barbatum* Kuntze, Rev. Gen. 2, 526, 1891 (nomina). — *H. trichocalyx* Briq. ex Micheli. Mém. Soc. Phys. Hist. Nat. Genève 32, 10, 21, 1897. — *Mesosphaerum yungasense* Britton ex Rusby in Mém. Torr. Cl. 4, 246, 1895. — *H. canaminensis* Rusby in Mém. N.Y. Bot. Gard. 7, 342, 1927. — *H. mutabilis* var. *Bromfieldi* et var. *micrantha* Briq. in Engler u. Prantl, Nat. Pflanzenf., ed. 1, IV, 3a, 339, 1897.

Caulibus saepius pubescentibus; foliorum laminis saepe in basim truncatis etiam subcordatis, pagina inferiore praesertim in typicis canescenti-tomentosa: verticillastris confertioribus in paniculis strictioribus dispositis; calycum maturorum tubis 3 ad 4 mm longis, dentibus quam tubi diametros vix longioribus.

var. **polystachya** Briq. in Engler u. Prantl, Nat. Pflanzenf., ed. 1, IV, 3a, 339, 1897. — *H. polystachya* Kunth l. c. 2, 321, 1817. — *H. aspera* Mar. et Gal. in Bull. Herb. Acad. Brux. 11, II, 189, 1844. — *H. mutabilis* var. *cuneata* Briq. in Ann. Conserve. et Jard. Bot. Genève 2, 209, 1898. — *Mesosphaerum polystachyum* Cook et Collins in Contrib. U. S. Nat. Herb. 8, 191, 1903.

Caulibus scabro-villosis; foliorum pagina inferiore vel pubescente vel villosa vix tomentosa; verticillastris pedunculis gracilibus 2—5 mm longis elatis et in paniculis amplis multifloribus dispositis; bracteis saepius purpureis; calycum maturorum tubis circiter 4 mm longis. dentibus 1—1,2 mm longis acutis setaceis.

var. **pavoniana** Briq. l. c. 208, 1898. — *H. canescens* var. *arvensis* Benth., Lab. Gen. et Sp. 712, 1835.

Caulibus villosulis, strictis; foliorum supremorum laminis rhomboideo-ovatis, in basi cuneato-angustatis, pagina inferiore canescente; paniculis confertioribus, strictis. angustis; calycum maturorum tubo circiter 4 mm longo.

21. **H. laciniata** Benth. in Hooker's Journ. of Bot. 2, 49. 1840. — *Mesosphaerum laciniatum* Kuntze, Rev. Gen. 2, 526. 1891 (nomen).

Herba perennis pusilla glabrata nunc prostrata nunc suberecta. in luto repente ut videtur, ramis 15—30 cm longis, internodiis 1.5—2,5 cm longis; foliis generis singularibus pinnatisectis, laminis 1,5—2 cm longis, 1—1,5 cm latis, ovatis, laciniis 9—11, inciso-dentatis, laciniis ultimis 1—2 mm longis obtusis, sinibus excavatis itaque ad venam mediam inter lacinias lacunas ellipticas 3 mm longas 1.5 mm latas pulchre formantibus, petiolis gracilibus 0,5—1 cm longis elatis; floribus 10—40 in capitulis parvis in foliorum supremorum axillis dispositis, pedunculis

gracilibus 2—2,5 mm longis elatis; bracteis ovatis et lanceolatis acutis 2—2.5 mm longis marginibus hirtellis subtentis; calycum florentium tubo 1.2—1.5 mm longis, ore valde obliquo, dentibus lanceolato-setaceis 0.4—6 mm longis, in maturitate immutatis. tubo 3 mm longo ad faucem decurvo; corollarum 2 mm longis; nuculis 0,7 mm longis oblongis fuscis.

Colombia: In planitiebus fluminis Orinoco (Goudot).

22. **H. microphylla** Pohl ex Benth., Lab. Gen. et Sp. 82, 1833 et in DC., Prodr. 12, 90, 1848. — *Mesosphaerum microphyllum* Kuntze, Rev. Gen. 2, 526, 1891 (nomen). — *H. inundata* Herzog Fedde, Rep. 7, 66, 1909. — *M. capitellatum* Jenn. in Ann. Carn. Mus. 11, 246, 1917. — *H. capitellata* Jenn. l. c. (nomen).

Herba canescens perennis paludosa ramosa altitudine 1—2 m caulibus infime lignosis, cortice griseo in squamis discedente rugosa, ramis gracilibus appresso-hirsutis quadratis, angulis obtusis, internodiis 3—5 cm longis; foliorum laminis 0.8—1.5 cm longis 5 ad 11 mm latis, obovatis, obtusis, in basi ad petiolum 2—5 mm longum marginatum angustatis, margine serrulata, pagina superiore molliter glanduloso-hirsuta, venis impressis, inferiore rugosula canescentiore vix sericea; floribus in capitulis globosis maturis 6—7 mm diametro, in paniculis amplis foliosis dispositis, pedunculis 7—15 mm longis elatis, bracteis linearibus 1—1,5 mm longis subtentis; calycibus florentibus vix 1,5 mm longis, dentibus linearibus tubum subaequantibus in maturitate immutatis, tubo 2,5—3 mm longo, ad fauces abrupte et valde recurvo, sub faucibus gibboso supra medium puberulo; corollis vix 2,5 mm longis, ad fauces dilatis, staminibus posticis in tubo anticis in labia inferiore sitis; nuculis fuscis oblongo-ovatis 0,9 mm longis, hilis in basi sitis confluentibus; receptaculo villoso globoso.

Venezuela: Sine loco, 1859. Cruger.

23. **H. recurvata** Poit. in Ann. Mus. Par. 7, 467, t. 28. f. 2. 1806. — *H. recurvata* var. *hirsutior* Benth., Lab. Gen. et Sp. 81. 1833. — *H. recurvata* var. *grandifolia* Benth., l. 81, 1833. — *H. microcephala* Bert. ex Benth., l. c. 81, 1833 (nomen). — *Mesosphaerum recurvatum* Kuntze, Rev. Gen. 2, 527. 1891 (nomen).

Herba annua ramosa altitudine ad 1 m et ultra caulibus erectis quadratis villosis angulis acutiusculis, internodiis 10 ad 15 cm longis, ramis divaricatis; foliorum laminis 2,5—9 cm longis. 2—7 cm latis, ovatis, acutis, infimis in basi leniter rotundato-cordatis, margine irregulariter serrata, crenis saepius acutis, paginis ambobus plus minusve hirsutis, petiolis villosis 1—4 cm

longis gracilibus elatis; floribus in capitulis globosis, maturis maximam partem circiter 1 cm diametro. in paniculis amplis foliosis dispositis, pedunculis gracilibus villosis 2—4 cm longis elatis, bracteis lineari-setaceis 5—8 mm longis hirtellis subtentis; calycibus florentibus circiter 3 mm longis extus hispidulis. dentibus tubum aequantibus setaceis erectis, duobus anticis paulo minoribus, ore sub-truncato, fructiferis 5 mm longis valde manifestoque recurvis et ad fauces valde geniculatis, dentibus fere immutatis; corollis albis rarius violescentibus circiter 5 mm longis, tubo 3—3,2 mm longo superne gradatim ampliato; nuculis oblongo-ovatis asperulis vix 1 mm longis.

Ecuador: Rio Napo, Orton. — Colombia: Cundinamarca: Ibague, Goudot; Cundinamarca: Bogota, Susumuco, 1000 m, Triana: Cundinamarca: prope Melgar. 500—600 m. 4.—5. XII. 1917, Pennell 2882; Magdalena: in Sierra de Santa Marta, 1000 m, XII. 1898, H. H. Smith 1379; in loco eodem, 250 ped.. XI. 1898, H. H. Smith 1489; El Cauca: prope Cordóba in valle Dagua, 30—100 m, XII. 1905, Pittier 549; El Valle: Buenaventura, 10 m, 5. V. 1922, Pennell et Killip 5300; Caldas: Belen, 1500 ad 1700 m, 15. IX. 1922, Pennell 10617; El Cauca: prope Aganche, 1150—1250 m, 3. VI. 1922, Pennell et Killip 6253; El Valle: Dagua, 1200—1500 m, 22. V. 1922, Pennell 5937.

24. **H. dilatata** Benth in DC., Prodr. 12, 103, 1848. — *H. crenata* var. *angustifolia* Benth. ex Seem., Bot. Voy. Herald. 187. 1852—1857. — *Mesosphaerum dilatatum* Kuntze, Rev. Gen. 2, 526, 1891 (nomen).

Herbae aromaticae perennes ramosae altitudine 30—50 cm caulibus ut videtur in basi saepius decumbentibus, ramis glanduloso-villosis, internodiis infimis vix 1 cm supremis 2—2,5 cm longis; foliorum laminis sessilibus 1,5—3 cm longis, 6—14 mm latis, oblongis, supremis frequenter ovato-oblongis. omnibus obtusis in basi truncato-rotundatis ad basim saepe abrupte leniterque dilatatis et subrevolutis, margine crenata, pagina superiore appresso-villosa, inferiore saepe subincana villoso-tomentosa; capitulis hemisphaericis maturis 1,5—2 cm diametro, bracteis recurvis 5—7 mm longis villosis subtentis in foliorum supremorum axillis in racemis dispositis raro corymbose confertis, pedunculis villosis 1—3 cm longis elatis: calycum florentium tubo 2—2,5 mm longo, dentibus 1,7—2 mm longis lanceolato-acuminatis, in maturitate tubo 3,5—4 mm longo; corollarum tubo 6—6,5 mm longo; nuculis ovatis 2 mm longis.

Venezuela: Ad ripas fluminis Orinoco, Chaffanjou; Carabobo: prope Valencia, 400—800 m, 5.—17. I. 1920, Pittier 8740; Amazonas: prope Maypures ad flumen Orinoco, VI. 1854, Spruce 3640.

Colombia: Meta: Villavincencio, 450 m, 26.—31. VIII.1917, Pennell 1432; Llano de San Martin, Triana; Llano de San Martin, Dawe 230.

25. **H. brachiata** Briq. in Ann. Conserve. et Jard. Bot. Genève 2, 215, 1898. — *Mesosphaerum brachiatum* Briq. l. c. (nomen).

Herbae perennes altitudine ad 1 m caulibus erectis simplicibus dense tomentosis angulis obtusis, internodiis 3—5 cm longis; foliorum laminis ovatis 4—6 cm longis, 2—3,5 cm latis, obtusis, in basi rotundatis, petiolis sat crassis 3—5 mm longis elatis, margine serrato-crenata, pagina superiore villosa, inferiore dense ferrugineo-tomentosa, ambobus mollibus; capitulis maturis ad 2 cm diametro bracteis ovato-lanceolatis sat rigidis venosis 6 ad 7 mm longis patentibus subtentis, in bracteorum foliosorum superne gradatim deminutorum axillis pedunculis crassis tomentosis 1 ad 2 cm longis elatis, saepe in paniculis dispositis ramorum lateralium capitulis corymbose confertis; calycibus florentibus 5—6 mm longis, dentibus setaceis tubum aequantibus, in maturitate tubo 4—5 mm longo ore subtruncato; corollarum tubo 5—6 mm longo; nuculis 1,1 mm longis, in apice glabris.

Colombia: Santander: In facie septentr. Mesa de los Santos, 1000—1500 m, 11.—15. XII. 1926, Killip et Smith 15007; Santander del Norte: ad Ocana, 1000 m, Schlim 158; Cundinamarca: prope Pipiral ad Quetame, 1300—1400 m, 4. IX. 1917, Pennell 1689; sine loco, Triana; ad Magdalena, André 990; ad Susumuco, 1240 m, 1. I. 1876, André 822; in valle Magdalena ad lacum Sapotoza-Chiriguana, VII. 1924, Allen 180.

Venezuela: Prope Caracas, XII. 1854, Birschel; prope La Victoria, 200 ped., 21. XI. 1856, Fendler 2055.

26. **H. fulva** Epl. in Fedde, Rep. Beih. 85, ?, 1936.

Suffrutex ut videtur caulibus rufo-villosis, internodiis 3 ad 5 cm longis; foliorum laminis 4—7 cm diametro, subrotundis, in apice obtusis, in basi subcordatis, petiolis 2—10 mm longis elatis, margine crenato-serrata, pagina superiore hirsuta, inferiore rufo-tomentosa molle; capitulis maturis 2 cm diametro hemisphaericis ad ramulorum apices congestis, bracteis ovato-lanceolatis villosulis acutis patentibus 5—6 mm longis subtentis, pedunculis villosis 8—15 mm longis elatis in paniculis dispositis; calycum florentium tubo 2,5 mm longo, dentibus subaequilongis

setaceis, ore truncato, in maturitate tubo 5 mm longo fere glabro; corollarum tubo 5 mm longo, nuculis 1,1 mm longis.

Venezuela: Prope Merida, Moritz 985. — Colombia: Sine loco, Goudot; monte Redondo prope Quetame, Cundinamarca, 1800—2100 m, 6. IX. 1917, Pennell 1817.

27. **H. hirsuta** Kunth in Humboldt et Bonpland, Voy., Nov. Gen. et Sp. Pl. 2, 318, t. 161, 1817. — *Mesosphaerum hirsutum* Kuntze, Rev. Gen. 2, 526, 1891 (nomen). — ? *H. siderotricha* Briq. in Bull. Herb. Boiss. 4, 791, 1896. — *Mesosphaerum siderotrichum* Briq., l. c. (nomen).

Herba perennis aspectus Marrubii in basi multo ramosa altitudine ad 1 m caulibus dense villoso-hirsutis, internodiis 3—5 cm longis; foliorum laminis 5—7 cm longis, 2—4,5 cm latis, saepius ovatis, infimis frequenter obovatis, supremis saepe ovato-lanceolatis, omnibus maximam partem obtusis in basi rotundatis et saepius ad petiolum cuneato-marginatum brevem abrupte angustatis, margine irregulariter crenato-serrata, pagina superiore hirsuta inferiore villosa; capitulis maturis saepius sessilibus 2—2.5 cm diametro, bracteis lanceolatis villosis 6—9 mm longis in maturitate occultis subtentis, in spicis interruptis frequenter 50—60 cm longis saepius foliosis internodiis 3—5 cm longis disposita; calycibus florentibus 5—6 mm longis, dentibus acicularibus 3,5—5 mm longis, in maturitate tubo 4,5—5 mm longo leniter distento; corollarum tubo 5 mm longo; nuculis 1,2 mm longis.

Venezuela: In locis aridis apricis montis Turimiquiri, Bonpland; Caripe, 1865, Moritz; Caracas: Guamaguana, Funck 160.

28. **H. pulegioides** Pohl ex Benth., Lab. Gen. et Sp. 128, 1833 et in DC., Prodr. 12, 127, 1848. — *Mesosphaerum pulegioides* Kuntze, Rev. Gen. 2, 526, 1891 (nomen). — *H. confluens* Urb., in Fedde, Rep. 20, 349, 1924.

Herba annua cinerea nunc stricta nunc praecipue in basi ramosa altitudine 60 cm et ultra caulibus appresso-hirsutis internodiis 3—6 cm longis; foliorum laminis supremis gradatim deminutis omnibus elliptico-lanceolatis, 3—8 cm longis, 1—2,5 cm latis, acutis, in basi ad petiolum obscurum cuneato-angustatis, margine serrata, paginis ambobus molliter hirsutis; capitulis maturis brunnescentibus globosis 10—12 mm diametro, bracteis linearibus 3—4 mm longis in maturitate occultis subtentis, in foliorum axillis saepius sessilibus frequenter pedunculis hirsutis ad 1 cm longis dispositis; calycibus florentibus 2,5 mm longis,

dentibus 1 mm longis, sinu inter anticos vix 1,5 mm alto in maturitate tubo 3 mm longo leniter dilato; corollarum tubo 2 mm longo; staminibus in labiam inferiorem sitis posticorum filamentis decurrentibus; nuculis 0,7 mm longis.

Venezuela: Topo, Caracas, XII. 1845, Birschel.

Colombia: Santa Marta, 500 m, XI. 1898—1901, H. H. Smith 1378; Santa Marta 2000 ft., X. 1898—1901, H. H. Smith 1797.

29. H. **sinuata** Pohl ex Benth., Lab. Gen. et Sp. 103, 1833 et in DC., Prodr. 12, 105, 1848. — *Mesosphaerum marrubiastrum* Kuntze, Rev. Gen. 2, 525, 1891 (nomen). — *H. sinuata* var. *hispida*, var. *subglabra*, var. *genuina* et var. *boruccensis* Briq. in Ann. Conserve. et Jard. Bot. Genève 2, 228, 1898.

Herba erecta ramosa altitudine ad 1—1,5 m caulibus sat crassis pilis subasperis crispis plus minusve villosis, internodiis 8—12 cm longis; foliorum laminis mediis 6—8 cm longis. 4—5 cm latis (infimis etiam 17 cm longis. 12 cm latis) late ovatis. acutiusculis, in basi maximam partem truncatis et abrupte attenuatis frequenter fere hastatis, margine crenata et irregulariter sinuata pannosa, pagina superiore tenuiter hirsuto-villosa, inferiore parum densiore, petiolis saepius marginatis 1—4 cm longis (infimis ad 10—11 cm longis) elatis; capitulis maturis globosis 15—20 mm diametro, bracteis 10—12 mm longis lineari-lanceolatis ciliatis subtentis, pedunculis villosis 1—3 cm longis elatis; calycum florentium tubo 2—2,5 mm longo extus glabro dentibus 1—1,5 mm longis subulatis hispido-villosis, in maturitate tubo 4—7 mm longo, dentibus rarius 2 mm longis acutissimis suberectis; corollarum albidarum tubo 4,5—6 mm longo; nuculis 1,2 mm longis.

Venezuela: Miranda, in collibus prope Los Teques, 7. IX. 1924, Pittier 11584; in valle Piritu prope Petarc, 11. XI. 1923. Pittier 11222; prope Coloniam Tovar. Fendler 899; ad cursus inferiorem fluminis Cotize prope Caracas, 12. XII. 1918, Pittier 8292; El Valle prope Caracas, 28. VIII. 1921, Pittier 9728; prope Caracas, XII. 1920—I. 1921, Bailey 334; sine loco, Moritz.

Colombia: Antioquia: Ad Antioquia. 1800—2200 m, 22. IX. 1922, Pennell 10964; prope Medellin, 20. VIII. 1927, Toro 431; Caldas: prope Belen, 1500—1700 m. 15. IX. 1922, Pennell 10618; Apia. 1600—1900 m. 4.—5. IX. 1922, Pennell 10288; prope Manizales, 1000—1500 m, 2. IX. 1922, Pennell 10193; Cundinamarca: prope Bogota, Goudot; El Cauca: ad Rio Piedros prope Popayan, 26. VI. 1922, Pennell et Killip 7207; ad Popayan, 1600—2000 m, Lehmann 8514.

30. **H. brevipes** Poit. in Ann. Mus. Par. 7. 465. 1806. — *H. acuta* Benth. in Linnaea 6. 82, 1831. — *Thymus biserratus* Blanco. Fl. Filip. ed. I, 478, 1839. — *Pycnanthemum subulatum* Blanco. Fl. Filip. ed. II, 333, 1845 et ed. III, 2, 251, t. 204. 1878. — *H. melanosticta* Griseb., Fl. Brit. W. Ind., 488, 1861. — *Mesosphaerum brevipes* et *melanostictum* Kuntze, Rev. Gen. 2, 526, 1891 (nomina). — *H. brevipes* var. *serrata* et var. *vulgaris* Briq. in Ann. Conserv. et Jard. Bot. Genève 2, 226, 1898.

Herba annua inamoena gracile altitudine 30—60 cm et ultra ramosa, caulibus acute quadratis superne praecipue ad angulos pilis erectis appresso-hirsutis, internodiis 5—8 cm longis; foliorum laminis saepius elliptico-lanceolatis, 4—6 cm raro 9 cm longis, 1,8—2 cm raro 3 cm latis, in apice acutis ab medium utrimque angustatis, in basi ad petiolum obscurum marginatum cuneato-attenuatis, margine irregulariter subduplicato-serrata, paginis ambobus sparse et laxe villoso-hirsutis; capitulis maturis globosis densissimis 10—12 mm raro 15 mm diametro, pedunculis appresso-hirtellis 3—15 mm longis elatis, bracteis subrigidis anguste lanceolatis villoso-ciliatis 4—6 mm longis, in maturitate reflexis fere occultis subtentis; calycibus florentibus 2,5—3 mm longis in maturitate tubulosis, tubo 2—3,5 mm longo, sub fauces leniter constricto intus sparse hispidulo, dentibus setaceis gracillimis 1,5—2,5 mm longis; corollarum albarum tubo 2,5—3 mm longo; nuculis vix 1 mm longis.

Colombia: Antioquia: Prope Malena, I.—XII. 1918, Pennell 3785; ad Rio Magdalena, V. 1801, Bonpland 1583; Bolivar: prope Dique, 16. XI. 1926, Killip et Smith 14583; ad lacus Sapatoza in valle fluminis Magdalena, Allen 324, 185.

Venezuela: Sacupana, 17. IV. 1896, Rusby et Squires 78.

31. **H. personata** Epl. in Fedde, Rep. Beih. 85, 1936.

Herba perennis caulibus ascendentibus ad basim decumbentibus longitudine ad 1 m praecipue ad angulos villosis, internodiis mediis 5—8 cm longis; foliorum laminis mediis 4—7 cm longis, 2—4,5 cm latis, ovatis, in apice obtusis, in basi maximam partem rotundatis et ad petiolos abrupte acuminatis, margine convexiore, irregulariter serrata, paginis ambobus sparse villosis, petiolis 1—2 cm longis elatis; capitulis maturis 10—12 mm diametro globosis compactis, bracteis ovatis lanceolato-oblongisve 5—6 mm longis subtentis in foliorum axillis pedunculis villosis 1—2 cm longis elatis; calycum florentium tubo 1 ad 1,5 mm longo hispidulo, dentibus 1—1,2 mm longis lanceolatis acutis, in maturitate tubo 3 mm longo, dentibus fere rectis posti-

corum medio paulo majore; corollarum tubo 2,5 mm longo; nuculis 1,2 mm longis in apice hispidis obovatis.

Colombia: Antioquia: Angelopolis prope Medellin, 27. VI, 1927, Toro 296; Caldas: prope San José, 1500—1800 m, 3. IX. 1922, Pennell 10229; prope Belen, 1500—1700 m, 15. IX. 1922, Pennell 10617; El Valle: prope Colima ad flumen Colima, 14. ad 15. IX. 1922, Killip 11182; inter Potredillo et Miraflores 1200 ad 1800 m, Palmira, 27. V. 1922, Pennell 6091; prope La Cumbre, 1500—1750 m, 7.—10. V. 1922, Pennell 5206; El Cauca: in valle Micay, VI. 1901, Lehmann; Del Choco: Quibdo, Rio Atrato, IV.—V. 1931, Archer 1877.

32. **H. obtusiflora** Presl ex Benth., Lab. Gen. et Sp. 107, 1833 et in DC., Prodr. 12, 115, 1848. — *Mesosphaerum obtusiflorum* Kuntze, Rev. Gen. 2, 525, 1891 (nomen). — *Mesosphaerum pallidum* Rusby in Bull. N. Y. Bot. Gard. 4, 433, 1907.

Herba suffruticosa erecta altitudine ad 1 m et ultra caulibus obtuse quadratis praesertim ad angulos appresso-hirsutis, internodiis 5—12 cm longis; foliorum laminis 6—15 cm longis, 2—4 cm latis, saepius ovato-ellipticis, in apice acutiusculis, ad basim maximam partem acuminato-angustatis vix rotundatis et in petiolos 0,5—1 cm longos marginatos attenuatis, utrimque praesertim subtus ad venas sparse villosis raro fere glabris, margine serrata; capitulis demum globosis 8—10 mm diametro compactis, in foliorum supremorum axillis pedunculis crassis 3—8 mm longis elatis, bracteis ovato-lanceolatis 3—4 mm longis subtentis; calycum florentium tubo 1,2 mm longo, dentibus 0,8 mm longis obtusis deltoideo-lanceolatis tribus posticis praesertim medio majoribus, in maturitate tubo 1,5 mm longo nuculis distento urceolato, dentibus conniventibus; corollarum albidarum tubo 2 mm longo; nuculis obovatis vix 1 mm longis in apice hispidulis.

Colombia: Antioquia: Prope Caramanta in graminosis, 1500—2100 m, 19. IX. 1922, Pennell 10790; Tolima: La Trinidad prope Libano, 1100—1300 m, 21.—25. XII. 1917, Pennell 3311: Caldas: La Palmita prope Armenia, 1100—1300 m, 23. VII. 1922, Pennell, Killip et Hazen 8598; prope San José, 1200—1600 m, 3. IX. 1922, Pennell 10211; Quebrada Cambia, 900—1300 m, 3. IX. 1922, Pennell 10201; Cundinamarca: ad Servida prope Bogota, Engels; El Valle: prope La Cumbre, 1600—1800 m, 14.—19. V. 1922, Killip 5683; prope La Cumbre, 1600—2100 m, 25.—27. IX. 1922, Killip 11616; ad Cuchilla prope Zarzal, 1200 ad 1600 m, 22. VII. 1922, Pennell et Hazen 8558; prope La Cumbre, 1500—1700 m, 7.—10. V. 1922, Pennell 5176; prope

Cordóba, 80—100 m, 6. V. 1922 Killip 5075: El Cauca: ad La Gallera in valle Micay, 1800—1900 m, 1. VII. 1922, Killip 7922; ad La Gallera, 1400—1500 m, 29.—30. VI. 1922, Killip 7776.

Ecuador: Prope Balao ad flumen, II. 1892, Eggers 14517.

33. **H. Parkeri** Benth., Lab. Gen. et Sp. 108, 1833 et in DC., Prodr. 12. 108, 1848. — *Mesosphaerum Parkeri* Kuntze, Rev. Gen. 2, 525, 1891 (nomen). — *H. iuruana* Loesn. ex Pilger in Verh. Bot. Ver. Brandenb. 47, 187, 1905.

Herba perennis habitu varia nunc ascendens nunc decumbens repens: caulibus 30—45 cm longis gracilibus fere teretibus tenue hirsutis, internodiis 3—6 cm longis; foliorum laminis fere sessilibus 4—6 cm longis, glabris vel hirtellis ellipticis lanceolatis vel ellipticis. obtusiusculis. in basi anguste rotundato-truncata etiam subcordata, margine leniter convexa serrata: capitulis maturis hemisphaericis circiter 8 mm diametro pedunculis gracilibus hirsutis 4—5 cm longis elatis, bracteis 5—7 mm longis ovato-oblongis subtentis. receptaculo piloso; calycibus florentibus turbinato-campanulatis 3—3,5 mm longis membranaceis glabris vel hirtellis in basi tamen pilosis, dentibus vix 1 mm longis deltoideo-ovatis obtusis, duobus anticis minoribus. in maturitate tubo 3,5 mm longo; corollarum albarum; nuculis 1,1 mm longis oblongis truncatis.

Venezuela: Esmeralda. 100 m, 19. X. 1928, Tate 255.

34. **H. vilis** Kunth et Bouché, Ind. Sem. Hort. Berolin. 13, 1848. — *Mesosphaerum vile* Kuntze, Rev. Gen. 2, 527, 1891 (nomen). — *H. Rothschuhii* Loesn. in Engl. Jahrb. 29, 100, 1901,

Herba caulibus longitudine ad 1 m superne praecipue ad angulos villosis, internodiis 8—10 cm longis; foliorum laminis fere sessilibus 7—10 cm longis, 2—4 cm latis. oblongis, acutis, margine supra medium convexiuscula, infra medium leniter concava et in basi abrupte truncato-subcordata serrata, paginis ambobus sparse hirsutis: capitulis maturis vix 1,5 cm diametro, bracteis 5—6 mm longis oblongo-lanceolatis fere glabris subtentis in foliorum supremorum paulo reductorum axillis pedunculis hirsutis 3—5 cm longis elatis; calycibus florentibus 4 mm longis campanulatis, dentibus subulatis tubum fere aequantibus, in maturitate tubo 4 mm longo tubuloso; corollarum albarum tubo 4—4,5 mm longo; nuculis 1 mm longis.

Venezuela: In angustiis fruticosis prope Los Charros de Tomale, 11. III. 1917, Pittier 7042; prope coloniam Tovar, 1800—2000 m, XII. 1924, Allart 450; prope coloniam Tovar, 19. XII. 1854, 21. II. 1858, Fendler 897; ad La Guayra, 4. I. 1840, Moritz 487.

35. **H. lantanaefolia** Poit. in Ann. Mus. Par. 7, 468, t. 29, f. 1, 1806. — *Mesosphaerum lantanaefolium* Kuntze, Rev. Gen. 2. 525, 1891 (nomen).

Herba perennis ramosa caulibus pluribus e caudice lignoso maximam partem decumbentibus frequenter radicantibus, 20 ad 50 cm longis et ultra, saepius appresso-hirsutis etiam incano-sericeis rarius villosis, internodiis 3—6 cm longis; foliorum laminis 1,5—6 cm longis, 0,8—2,5 cm latis, maximam partem 2—3 cm longis, ovatis rarius ellipticis utrimque obtusis, in basi saepius rotundato-angustatis, fere sessilibus, margine crenato-serrata, pagina superiore vel hirtella vel hirsuta, inferiore praesertim ad venas hirsuto-villosa, etiam subsericeis, saepe incanis, ambobus rarius glabrescentibus; capitulis maturis 12—20 mm diametro, bracteis ovatis obovatisve subfoliosis 5—8 mm longis frequenter serratis hirsutis subtentis, pedunculis appresso-hirsutis rarius villosis 2—7 cm longis elatis; calycum florentium tubo 1,5—2,5 mm longo, extus ad basim piloso, dentibus subulatis nunc puberuli nunc fere glabris 1,5—3.5 mm longis acutis, in maturitate tubo 4—5 mm longo; corollarum albarum rosearum tubo 4—4,5 mm longo; nuculis 1.2 mm longis ovatis.

Venezuela: Merida: Prope Quirora, 1800 m, 9. X. 1921, Jahn 686; Trujillo prope Trococo, 1100 m, 11. I. 1922, Jahn 758; in Sierra de Cumana, 1500 m, Funck 624; Cumana, Bonpland 272; prope Caracas, Moritz 416; inter Turmero et Chuao, 1500 m. IX. 1899, Preuß 1630; in montibus prope Caracas et ad coloniam Tovar, 1300—2000 m, Fendler 896.

Colombia: Huila: In Cordillera Orient. prope Neiva, 1300 ad 1800 m, 1.—8. VIII. 1917, Rusby et Pennell 965; Intendencia Meta: Prope Villa vincenzio, 450 m, 26.—31.VIII. 1917, Pennell 1468; Magdalena: Santa Marta, 500 m, XI. 1896—1901, H. H. Smith 581; Cundinamarca: La Mesa prope Bogota, 1300 m, Triana; El Cauca: La Teta in valle superiore Cauca, 1000—1500 m. Lehmann 5784; in valle Magdalena, 7. VIII. 1924, Allen 324; Antioquia: prope Sta. Barbara, 900—1500 m, 21. IX. 1922, Pennell 10898; El Cauca: prope Aganche, 1150—1250 m, 3. VI. 1922, Pennell 6257; Tolima: prope Piparal ad Quetame, 1300—1400 m. 4. IX. 1917, Pennell 1691.

Ecuador: Prope Loja, Hartweg 802.

36. **H. rhomboidea** Mart. et Gal. in Bull. Acad. Brux. II, II, 188, 1844. — *Thymus virginicus* Blanco (non L.), Fl. Filip., ed. I, 478, 1837. — *Pycnanthemum decurrens* Blanco, Fl. Filip.,

ed. II. 333. 1845 et ed. III, 2, 251, t. 294, 1878. — *H. celebica* Zoll. ex Koorders in Mededeel. 'S Lands Plant. Buitenzorg **19**, 561, 1898 (nomen). — *H. decurrens* Epl. in Fedde, Rep. **34**, 120, 1933.

Herba perennis altitudine 1—2 m caulibus obtuse quadratis superne ad angulos plus minusve villosis rarius fere glabris, internodiis mediis 5—10 cm longis; foliorum laminis 6—12 cm longis. 1,5—4 cm latis, maximam partem lanceolatis, rarius ovato-lanceolatis in apice acutis, in basi ad petiolos obscuros 0,5—1,5 cm longos gradatim cuneato-angustatis, supremis frequenter cuneato-sessilibus, margine irregulariter serrata vix pannosa, paginis ambobus nunc fere glabris nunc hirtellis; capitulis maturis globosis 1,5—2,5 cm diametro. bracteis oblongo-lanceolatis 5—8 mm longis subtentis, pedunculis maturis hirtellis 3—10 cm plerumque 5—6 cm longis elatis; calycum florentium tubo 2 mm longo, dentibus lineari-subulatis, in maturitate tubo 6—8 mm longo extus sparse villoso, dentibus erectis brevissime puberuli quam *H. capitatae* et paulo crassioribus saepe 2 mm longis; corollarum albarum tubo 3,5—4 mm longo; nuculis circiter 1 mm longis.

Commonly confused with *H. capitata* from which it may readily be distinguished by the decurrent pubescence along the angles of the stem, the narrower more rhomboidal leaves and the larger flowers. The pubescence of Malayan specimens is sometimes very marked and while the stems of some Mexican specimens may be nearly glabrous, a few tell-tale spreading hairs may be found toward the tips of the stems.

Galapagos: In insula Charles, Goodridge; in insula Albemarle, Stewart 3324.

37. **H. capitata** Jacq., Coll. 1, 102, 1786. — *Clinopodium capitatum* Sw., Prodr. Veg. Ind. Occ. 88, 1788. — *H. macrochila* Mart. ex Steud., Nomen., ed. II. 1. 794 ,1840 (nomen). — *Mesosphaerum capitatum* Kuntze, Rev. Gen. 2. 525. 1891 (nomen).

Herba perennis altitudine 1—2 m caulibus obtuse quadratis glabratis ad apices utrimque tenuiter appresso-hirtellis nullomodo villosis. internodiis mediis 5—10 cm longis; foliorum laminis membranaceis 4—12 cm longis, 2,5—6 cm latis, ovatis, acutiusculis vel saepe obtusis. in basi subrotundatis et ad petiolos 1—3 cm longos acuminato-angustatis, supremis frequenter cuneato-sessilibus, margine convexiore, irregulariter serrata vix tamen pannosa, paginis ambobus sparse appresso-hirsutis; capitulis maturis globosis 2—2,5 cm diametro, bracteis ovato-lanceolatis 5—7 mm longis in maturitate omnino occultis subtentis, pedunculis appresso-hirtellis 2,5—6 cm plerumque

3—4 cm longis elatis; calycum florentium tubo 1,5 mm longo, dentibus lineari-subulatis, in maturitate tubo 8—10 mm longo extus sparse villosulo fere glabro, dentibus 1,5 mm longis brevissime puberulis fere rectis; corollarum albarum tubo 2,5 ad 3 mm longo; nuculis 1,3 mm longis.

Colombia: Magdalena: Ad Santa Marta, 2000 ped., H. H. Smith 1377; Cundinamarca: prope Paime, 1922, Fr. Ariste-Joseph; Caldas; Belen, 1500—1700 m, 15. IX. 1922, Pennell 10619; prope San José, 1200—1600 m, 3. IX. 1922, Pennell 10210; El Valle; prope Lomitas, 6. V. 1922, Pennell 5462; Cundinamarca; prope La Paila, VI. 1853, Holton 491; Cundinamarca: ad flumen Magdalena, Goudot; Tolima: prope La Trinidad, 1100—1200 m, 21.—25. XII. 1917, Pennell 3373.

Ecuador: In Cerro Maglor Alto, 400 m, 14. V. 1923, Anthony et Tate 31; prope Guayaquil, Jameson.

Venezuela: Prope Caracas, 1000 m, 20. II. 1854, Fendler 898; Cristobal Colon, 5. I.—22. II. 1923, Broadway 410; prope Caracas, Funck 429; inter La Guayra et Caryacito, 1300 m, IV. 1854, Birschel.

38. **H. florida** Benth., Bot. Voy. Sulphur 150, 1844. — *Mesosphaerum floridum* Kuntze, Rev. Gen. 2, 526, 1891 (nomen).

Herba perennis altitudine 1—1,5 m ramosa caulibus glabris, internodiis supremis 3—8 cm longis; foliorum laminis 4—7 cm longis 2—3,5 cm latis (infimis fortasse majoribus) ovatis vel ovato-lanceolatis, membranaceis, in apice acutis, in basi ad petiolos graciles 1—2 cm longos cuneato-angustatis, margine irregulariter serrata subpannosa, paginis ambobus fere glabris, inferiore ad venas hirtella; capitulis maturis globosis 2—3 cm diametro, bracteis oblongis obtusis glabris in basi albidis 10—15 mm longis subtentis, pedunculis hirtellis 1—4 cm longis elatis; calycum florentium tubo 2 mm longo, dentibus acicularibus, in maturitate tubo 6—7 mm longo, dentibus vix rigidis acutissimis sparse villosis leniter patentibus 3—4 mm longis; corollarum albarum tubo 4—5 mm longo; nuculis 1,2 mm longis.

Apparently a very local but constant species similar to *H. savannarum* in many ways but distinguished by the thinner leaves, the more slender less rigid calyx teeth and the pubescence.

Ecuador: Prope Guayaquil, Sinclair; Guayaquil, VII. 1856, Remy; prope Guayaquil 1842, Hartweg 683; prope Guayaquil, VI. 1923, Hitchcock 19925; prope Guayaquil, VI. 1925, Mille 12; Guayaquil: ad viam ad Aguas Piedras, 26. VII. 1921, Rowlee et Mixter 1088.

39. **H. savannarum** Briq. in Ann. Conserve. et Jard. Bot. Genève 2, 216, 1898. — *Mesosphaerum savannarum* Briq., l. c. (nomen).

Herba perennis erecta ramosa altitudine 1—1,5 m caulibus glabris, internodiis supremis 4—10 cm longis; foliorum laminis 6—12 cm longis, 1,5—3 cm latis (infimis fortasse latioribus) lanceolatis utrimque angustatis, acutis, in basi ad petiolos subnullos cuneatis, subcoriaceis, paginis ambobus fere glabris, venis prominulis plus minusve sparse hirtellis, margine acute et regulariter serrata, crenis remotis; capitulis demum globosis 2—3 cm diametro, bracteis 8—15 mm longis ovato-lanceolatis glabris acutis ut videtur in basi albidis subtentis, pedunculis maturis 3—7 cm longis elatis; calycum florentium tubo 3,5 mm longo, extus nisi in basi glabro, dentibus acicularibus fere glabris, in maturitate tubo 7—8 mm longo ad medium sparse villoso, dentibus rigidis 3—5 mm longis in apice leniter recurvis acutissimis; corollarum albarum tubo 6—7 mm longo; nuculis 1,5 mm longis.

Resembles the glabrous forms of *H. conferta* known as *H. Lundii* from which it may be readily distinguished by the longer, more oblong nearly glabrous bracts which have the same habit as those of *H. radiata* and *H. florida*.

Colombia: Magdalena: Santa Marta, H. H. Smith 1376; prope San Antonio, 1700 m, 7. XI. 1899, Langlasse 32; Tolima: in collibus prope San Lorenzo, 800—1000 m, 29.—30. XII. 1917, Pennell 3504; Cundinamarca: in valle Magdalena, 1200 m, Triana; sine loco, Goudot; El Valle: prope Palmira in collibus 1200—1800 m, 27. V. 1922, Pennell et Killip 6042; prope La Cumbre, 1800—2100 m, 12.—18. V. 1922, Pennell 5546.

40. **H. conferta** Pohl ex Benth., Lab. Gen. et Sp. 112, 1833 et in DC., Prodr. 12, 112, 1848. — *Mesosphaerum confertum* Kuntze, Rev. Gen. 2, 526, 1891 (nomen).

Herba perennis ramosa altitudine ad 60 cm caulibus obtuse quadratis sat crassis molliter hirsutis, internodiis 2—5 cm longis; foliorum laminis ovato-ellipticis, 6—9 cm longis, 2—5 cm latis, in apice obtusis, in basi ad petiolos breves subnullos rotundato-angustatis, margine crenato-serrata, pagina superiore plus minusve hirsuta inferiore venoso-rugosa molliter villosa, venis prominulis impressis subtus elevatis; capitulis maturis hemisphaericis 18—22 mm diametro, bracteis ovato-lanceolatis cinereo-pubescentibus 7—8 mm longis in maturitate vix valde reflexis quin etiam recurvis et in basi ad calyces appressis subtentis, pedunculis villosis 1—3 cm longis elatis; calycum florentium

tubo 2—2,5 mm longo, dentibus nunc subulatis nunc acicularibus, in maturitate tubo 5—6 mm longo, intus extusque ad medium valde villoso-annulato, receptaculo sericeo-pilosiore, dentibus 2,5 ad 3,5 mm rarius 4 mm longis utrimque minutissime hirtellis rarius glabris forma variis acutis rigidis suberectis; corollarum albarum tubo 4—5,5 mm longo; nuculis 1,2—1,5 mm longis.

var. **angustifolia** Benth. in DC., Prodr. **12**, 112, 1848. — *H. ferruginea* Benth., Lab. Gen. et Sp. 113, 1833 et in DC., Prodr. **12**, 111, 1848. — *H. excelsa* Mart. et Gal. in Bull. Acad. Brux. 9. 11, 188, 1844. — *H. Lundii* Benth. in DC., Prodr. **12**, 111, 1848. — *H. radula* Mart. ex Schmidt in Mart., Fl. Brasil. 8, 121, 1858 (nomen). — *Mesosphaerum ferrugineum*, *M. excelsum* et *M. Lundii* Kuntze, Rev. Gen. **2**, 526, 1891 (nomina). — *H. constricta* Briq. in Ann. Conserve. et Jard. Bot. Genève **2**, 217, 1898. — *H. Jurgenseni* Briq. l. c. 2, 219, 1898. — *Mesosphaerum constrictum* et *M. Jurgenseni* Briq., l. c. (nomina).

Venezuela: In montibus prope Guigne, 1300 m, 25. I. 1855, Fendler 895; inter Turmero et Chuao, IX. 1899, Preuß 1642; in campo prope Meso Grande, 28. X. 1922, Pittier 10574; sine loco, Moritz 986.

Colombia: Meta: Villavicencio in Llano de San Martin, Karsten; prope Villavicencio, Engels; Santander: in Mesa de los Santos in paludosis 1500 m, 11.—15. XII. 1926, Killip et Smith 15301; Cundinamarca: prope Susumuco, 1856, Triana; prope Quetame, 1300—1400 m, 4. IX. 1917, Pennell 1690.

41. **H. atrorubens** Poit. in Ann. Mus. Par. 7, 466, t. 27, f. 3, 1806. — *Mesosphaerum atrorubens* Kuntze, Rev. Gen. 2, 525, 1891 (nomen). — *H. procumbens* Cham. et Schlecht. in Linnaea 5, 101, 1830. — *H. pascuorum* Mart. ex Schmidt in Mart., Fl. Brasil. 8, 118, 1858 (nomen). — *H. tenella* Briq. et Spruce in Ann. Conserve. et Jard. Bot. Genève 2, 223, 1898. — *Mesosphaerum tenellum* Briq. l. c. (nomen).

Herba prostrata reptans etiam subscandens nodiis radicantibus caulibus longitudine 1—3 m, ramis ascendentibus gracilibus, internodiis quam folia duplo triplove longioribus quadratis, angulis obtusis plus minusve hirsutis; foliorum laminis 1,5—5 cm longis, 1—2,5 cm latis, ovatis, obtusis, in basi rotundatis et ad petiolum 0,5—1,5 cm longum cuneato-angustatis, margine convexiore regulariter crenato-serrata, paginis ambobus pilis crassis sparse hirsutis; capitulis maturis hemisphaericis 8—10 mm diametro, bracteis subfoliosis, ovatis, ciliatis hirsutisque 4—6 mm longis subtentis, in foliorum axillis pedunculis gracilibus 0,5—2,5 cm

longis elatis; calycibus florentibus 4 mm longis ore truncato, dentibus quam tubus paulo brevioribus setaceis aequalibus strictis acutissimis sinibus ciliatis, in maturitate tubo 4—4,5 mm longo leniter dilato sub fauces leniter constricto; corollarum albarum rosearumve tubo 4—5 mm longo; stylo in basi incrassato; nuculis ovato-rotundis 1 mm longis.

Ecuador: In loco ignoto.

Colombia: Antioquia: Botero ad viam, 27. IX. 1922, Pennell 10975; Caramanta, 2000—2200 m, 19. IX. 1922, Pennell 10778; Caldas: Apia. 1600—1900 m, 4.—5. IX. 1922, Pennell 10287; Santander: Puerto Wilches, 100 m, 28. XI.—2. XII. 1926, Killip et Smith 14794: Mesa de los Santos declivitate septentrionale, 1000—1500 m, 11.—15. XII. 1926, Killip et Smith 15386; Kilometer 16" inter Puerto Wilches et Puerto Santos, 110—115 m, 29. XI. 1926, Killip et Smith 14858; Cundinamarca: in silvis prope Quetame, 4. IX. 1917, Pennell 1679: El Valle: Cordóba: in valle Dagua, 6. V. 1922, Killip 3074; Cordóba in silvis ad Rio Dagua, 80—100 m, 6.—8. V. 1922, Killip 5074; El Cauca: San Antonio, Rio Ortega, 2000—2200 m, 2. VII. 1922, Pennell et Killip 8041; in valle Micay 1400—1500 m, 29. ad 30. VI. 1922, Killip 7777; collibus Miraflores dictis prope Palmira, I. 1906, Pittier 895; silvis ad flumen Huangubio, 1884, Lehmann 618; ad Popayan, 1700—2500 m, Lehmann 5782, 5783.

Catopheria Benth.

Catopheria Benth. in Benth. et Hook., Gen. pl. **2**, 1173, 1876. — *Orthosiphon* sect. *Catoferia* Benth. in DC. Prodr. 12, 53, 1848.

Herbae perennes foliis amplis petiolatis; floribus sessilibus in spicis densis cylindratis bracteis perstatis reflexis subtentis dispositis; calycum saepe coloratorum tubo subcylindrato venuloso intus nudo labia superiore integra rotundato-truncata, inferiore ad apicem 4-dentata; corollarum tubo tubaeformi gradatim ampliato intus nudo leniter arcuato, labia superiore breviter 4-laciniata, inferiore integra subplana subaequilonga: staminibus quattuor supra tubi medium positis ad labiam inferiorem declinatis et longe exsertis glabris; stylo glabro longe exserto in apice sulcato-capitato; nuculis atris ovatis hilo in basi posito.

1. **C. spicata** Benth. in Benth. et Hook., Gen. Pl. **2**, 1173, 1876. — *Orthosiphon spicatus* Benth. in DC., Prod. **12**, 53, 1848.

Herba perennis suffruticosa altitudine fere ad 2 m ramis villosis; foliorum laminis ellipticis, 8—17 cm longis, 4—9 cm

latis, utrimque acuminatis margine sinuato-serrata, pagina superiore sparse villosa inferiore nisi ad venam fere glabra, petiolis 2—10 cm longis elatis; floribus in spicas nunc cylindratas nunc capitatas 3—20 cm longas confertis, pedunculis 10—25 cm longis elatis, bracteis roseo-purpureis deltoideo-attenuatis sparse villosis subtentis, calycum rosearum tubo 7—9 mm longo in maturitate paulo aucto, labiis subaequilongis, 6—9 mm longis, superiore reflexa, inferioris dentibus acutis irregularibus circiter 1 mm longis; corollarum albidarum tubo circiter 10 mm longa intus infra medium pubescenti-annulato, labiis 4.5 mm longis subaequilongis, staminibus 2 cm et stylo 4 cm e corollae tubo exsertis.

Colombia: Ocaña: Convencion (Schlim 714); Parroguia de Carmen (Purdie).

Ecuador: ad pedem montis Campana (Spruce 4330).

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